CHAPTER 2 REGULATION OF METHANE

This chapter addresses the EPA's responses to public comments on regulation of methane in the EPA's Proposed *Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources.*

Commenters also raised issues on topics that are not covered by this chapter. Please refer to the following chapters for responses specific to those issues:

- **Chapter 1**: Source Category
- **Chapter 3**: Well Completions
- **Chapter 4**: Fugitives Monitoring
- **Chapter 5**: Pumps
- **Chapter 6**: Controllers
- **Chapter 7**: Compressors
- **Chapter 8**: Equipment Leaks at Natural Gas Processing Plants
- **Chapter 9**: Liquids Unloading
- **Chapter 10**: Storage Vessels
- **Chapter 11**: Compliance
- **Chapter 12**: Regulatory Impact Analysis
- **Chapter 13**: Existing State, Local, and Federal Rules
- **Chapter 14**: Subpart OOOO
- **Chapter 15**: Miscellaneous
- **Chapter 16**: Comment Period Extension

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2.1 EPA's Authority to Establish GHG Standards in the Form of Limitations on Methane Emissions

Commenter Name: Michael J. Meyers, et al., Assistant Attorneys General
Commenter Affiliation: Attorneys Generals of New York, Massachusetts, Oregon, Rhode Island, and Vermont (States)
Document Control Number: EPA-HQ-OAR-2010-0505-6940
Comment Excerpt Number: 2

Comment: EPA's Promulgation of NSPS for Methane Emissions from Oil and Gas Sources is Necessary and Required Under the Act.

When the EPA administrator determines that a category of sources "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare," the Administrator "shall" include that category on a list of stationary sources. 42 U.S.C. §7411(b)(1)(A) (§111(b)). Pursuant to §111(b), EPA previously listed crude oil and natural gas production as a source category that contributes significantly to air pollution that may reasonably be anticipated to endanger public health and welfare. See Priority List and Additions to the List of Categories of Stationary Sources, 44 Fed. Reg. 49,222 (Aug. 21, 1979).

Numerous scientific assessments establish that anthropogenic greenhouse gas emissions, including methane, may reasonably be anticipated to endanger public health or welfare. See 74 Fed. Reg. 66,496 (Dec. 15, 2009) (EPA endangerment determination); 80 Fed. Reg. 64,662, 64,682-86 (Oct. 23, 2015) (summarizing additional scientific evidence since 2009 endangerment determination). The oil and natural gas source category causes or contributes significantly to such greenhouse gas air pollution. Further, available technology can effectively and efficiently reduce methane emissions from the oil and natural gas industry. Therefore, the Act compels EPA's proposal of NSPS under §111(b) for methane emissions from new and modified oil and natural gas sources.

A. Emissions of methane, a potent greenhouse gas, significantly endanger public health and welfare.

Greenhouse gas pollution is warming our planet, with significant and wide-ranging adverse effects to human health and welfare. The U.S. Global Change Research Program's Third National Climate Assessment recently concluded that the evidence of human-induced global warming continues to strengthen and that impacts are increasing across the country. Finding that

"climate change, once considered an issue for a distant future, has moved firmly into the present," the Assessment's authors present compelling bases for the need to reduce greenhouse gas emissions from major sources, such as the oil and gas sector. Given the strong body of science that demonstrates the impacts on human health and the environment, EPA must act expeditiously to ensure that major sources of greenhouse gases—such as the oil and gas industry—promptly and aggressively limit their emissions. Prompt and effective action in the power generating, industrial, and transportation sectors are required if the U.S. and the rest of the world are to have a reasonable chance of avoiding the most severe impacts of global warming.

EPA determined in its 2009 endangerment finding that methane is one of the six greenhouse gases that endanger public health and welfare. See Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,696, 66,497 (Dec. 15, 2009). Methane is a very potent greenhouse gas. Pound for pound, it warms the climate about thirty-four times more than carbon dioxide over a 100-year period, according to the Intergovernmental Panel on Climate Change, and on a twenty-year time frame, has about eighty-six times the global warming potential of carbon dioxide. As noted in the White House's Strategy to Reduce Methane Emissions (March 2014), methane accounts for about nine percent of greenhouse gas emissions in the country, and that percentage will rise by 2030 unless measures are put in place to cut those emissions. The White House, Climate Action Plan: Strategy to Reduce Methane Emissions 1 (2014) [hereinafter Methane Strategy]. Not surprisingly, therefore, the President's Climate Action Plan issued in June 2013 states that curbing emissions of methane is "critical" to our effort to address global climate change. Executive Office of the President, The President's Climate Action Plan 10 (2013) [hereinafter Climate Action Plan].

B. The oil and natural gas source category is a significant contributor to climate change pollution.

As EPA states in the Proposed Rule, natural gas and petroleum systems are the largest emitters of methane in the United States, emitting twenty-nine percent of anthropogenic methane. 80 Fed. Reg. at 56,606. These methane emissions contribute substantially to nationwide greenhouse gas emissions, making oil and gas operations the second largest emitter of greenhouse gases in the United States, second only to fossil-fueled electricity generation. Id. at 56,598.

In evaluating methane emissions, there are four major segments from production to delivery that must be considered during which methane either leaks or is intentionally vented to the atmosphere. Each of these segments represents a significant percentage of methane emissions:

Production. The production segment includes extraction of oil and gas from a well and use of gathering pipes or lines to move the fuel to a processing facility.

Processing. Some processing can occur at the wellhead, otherwise compressors move natural gas from the well to a facility that removes various hydrocarbons and liquids to create "pipeline quality" gas that it is ready to be shipped via pipeline in the transmission phase.

Transmission. The transmission segment includes the use of pipelines and compressors to ship natural gas from processing facilities to distributors.

Distribution. The distribution segment includes the use of city gates to receive the natural gas from transmission pipelines and then distribute the gas through smaller, lower pressure lines to commercial and residential customers.

According to 2012 emissions data from the oil and gas sector, the production segment accounts for approximately thirty-two percent of methane emissions, the processing segment fourteen percent, the transmission segment thirty-three percent, and the distribution segment twenty percent. U.S. Envtl. Prot. Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013, Table 3-44 (2014) [hereinafter Inventory of U.S. Greenhouse Gas Emissions and Sinks]. The Proposed Rule addresses methane emissions in production, processing, and transmission, but does not include the distribution sector. Because each of these segments represents a significant percentage of emissions, a successful strategy to reduce methane must address all four segments. EPA has previously acknowledged that its authority under the Act would extend to address emissions from all of these segments. See Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 76 Fed. Reg. 52,738, 52,745 (Aug. 23, 2011).

The critical need to limit methane emissions was further underscored by EPA's recently-finalized Clean Power Plan targeting greenhouse gas emissions from existing power plants. One of the underpinnings of that rule is encouraging States to switch from electricity generation using coal to generation using natural gas and other lower carbon-intensive fuels. Because of the readily-available supply of natural gas in this country, and the fact that natural gas is mostly methane, we must act to ensure that the global warming benefits of switching from coal to natural gas are not diminished because of the release of methane throughout the natural gas system—from production to delivery to the end user. According to a recent World Resources Institute report, reducing methane leakage rates from the entire natural gas system to less than one percent of total production would ensure that the climate impacts of natural gas are lower than coal or diesel fuel. James Bradbury et al., Clearing the Air: Reducing Upstream Greenhouse Gas Emissions from U.S. Natural Gas Systems 2 (2013) [hereinafter WRI Clearing the Air Report].

C. States have taken action on reducing methane emissions from the oil and gas sector.

Not only is reducing methane emissions a necessary component of addressing global warming, but it is also required under the Act. In December 2012, the States sent a notice of intent to sue EPA based on the agency's failure to set emission standards for methane in its 2012 NSPS rule for the oil and gas sector, Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 77 Fed. Reg. 49,490 (Aug. 16, 2012). As explained in our notice letter, EPA had determined that emissions of this potent greenhouse gas endanger public health and welfare, and that processes and equipment in the oil and gas sector emit vast quantities of methane. We further explained that EPA had compelling data, including from eighteen years of experience administering the Natural Gas Star Program, demonstrating that many measures to avoid (or reduce) methane emissions from new and

existing oil and gas operations are available and cost-effective. In light of these findings, EPA's failure to determine in its 2012 rulemaking whether standards limiting methane emissions from oil and gas operations under § 111 of the Act were appropriate was a violation of a nondiscretionary duty of the Administrator or constituted an unreasonable delay in taking agency action.

Although the 60-day and 180-day notice periods to bring a nondiscretionary duty and unreasonable delay claim, respectively, expired, the States chose not to file a lawsuit in light of the President's subsequent commitment that EPA and other federal agencies would examine how to reduce methane emissions from the oil and gas sector. See Climate Action Plan at 10. This commitment was fleshed out in the Administration's Strategy to Reduce Methane Emissions, which was issued on March 28, 2014. As set forth in the methane strategy document, EPA's issuance of technical white papers in April 2014 was the first step in considering direct regulation of methane in the oil and gas sector through rulemaking. Methane Strategy at 2. Building on this strategy, the Administration in January 2015, announced a new goal to cut methane emissions from the oil and gas sector by forty to forty-five percent from 2012 levels by 2025.

In the meantime, a number of states—including Colorado, Pennsylvania, Ohio, and Wyoming—proceeded with regulations to prevent leaks from the oil and gas sector. Colorado's rules, passed in February 2014, govern both new and existing wells and require leak inspections either monthly, quarterly, or annually, depending on the size of the emissions. These regulations, which target methane emissions directly rather than as a co-benefit of reducing other pollution, are expected to reduce methane emissions by approximately 65,000 tons per year.

Response: The EPA considered the information provided by the commenter, and find that it is consistent with the approach that EPA has taken in this action.

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider
Commenter Affiliation: Clean Air Task Force et al.
Document Control Number: EPA-HQ-OAR-2010-0505-7062
Comment Excerpt Number: 14

Comment: EPA Has Reasonably Determined that Regulation of Methane from the Oil and Gas Sector Is Appropriate Under Section 111.

Section 111 of the Clean Air Act directs EPA to publish, and from time to time revise, a list of categories of stationary sources that, in EPA's judgment, cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. 42 U.S.C. § 7411(b)(1)(A). EPA listed oil and gas sources as a source category under section 111 in 1979.

Priority List and Additions to the List of Categories of Stationary Sources, 44 Fed. Reg. 49,222, 49,226 (Aug. 21, 1979); 40 C.F.R. § 60.16. Under this source category, EPA first promulgated VOC new source performance standards in 1985, Standards of Performance for New Stationary

Sources; Equipment Leaks of VOC From Onshore Natural Gas Processing Plants, 50 Fed. Reg. 26,122 (June 24, 1985), and issued SO2 new sources performance standards from gas processing plants that same year, Standards of Performance for New Stationary Sources; Onshore Natural Gas Processing SO2 Emissions, 50 Fed. Reg. 40,158 (Oct. 1, 1985). EPA later revised the standards to address VOC emission from a broader suite of sources. Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 77 Fed. Reg. 49,490 (Aug. 16, 2012). *See* 40 C.F.R. § 60, subpart OOOO.

EPA now proposes new source performance standards for methane emissions from oil and gas equipment in the production, gathering and boosting, processing, and transmission and storage segments. The agency is fully within its legal authority to issue these regulations pursuant to the 1979 listing of the oil and gas industry as a section 111 source category, and no further administrative endangerment finding is necessary.

As noted above, section 111(b)(1)(A) states that the Administrator "shall include" a category of sources in the list for which standards are required "if in [her] judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7411(b)(1)(A). The statutory language refers to the category of sources, not to specific pollutants from the category. Section 111(b)(1)(B) then directs the Administrator to "establish . . . Federal standards of performance for new sources within [a listed] category." *Id.* § 7411(b)(1)(B). The endangerment and contribution findings are part of the process of listing a category of sources, not the process of promulgating standards of performance for particular air pollutants emitted by those sources. Therefore, the plain language of the statute makes clear that EPA need not make a pollutant-specific endangerment or contribution determination for methane emissions from sources in the proposed subpart OOOOa.

Moreover, in practice, EPA has never issued a new or revised endangerment finding when revising new source performance standards ("NSPS") under § 111, even when revising the NSPS to add a new pollutant to those regulated in the category or adding a new source to the category. Examples of this practice abound over the course of EPA's time tested experience administering section 111 over several decades. *See, e.g.*, 74 Fed. Reg. 51,950, 51,957 (Oct. 8, 2009) ("The plain language of section 111(b)(1)(A) provides that such findings are to be made for source categories, not for specific pollutants emitted by the source category… Determinations regarding the specific pollutants to be regulated are made, not in the initial endangerment finding, but at the time the performance standards are promulgated.") (amending subpart Y, which had set PM standards since 1976); 41 Fed. Reg. 3826 (Jan. 26, 1975) (relying on an endangerment finding for one pollutant when setting standards for two pollutants); 77 Fed. Reg. 9304 (Feb. 16, 2012) (amending 71 Fed. Reg. 9866 (Feb. 27, 2006) regarding HAPs emissions from fossil fuel-fired EGUs); 75 Fed. Reg. 54,970 (Sept. 9, 2010) (amending 36 Fed. Reg. 24,876 (Dec. 23, 1971) regarding HAPs emissions from Portland cement plants); 73 Fed. Reg. 35,838 (June 24, 2008) (amending 39 Fed Reg. 9308 (Mar. 8, 1974) regarding petroleum refineries); 70 Fed. Reg. 28,606 (May 18, 2005) (amending 36 Fed. Reg. 24,876 (Dec. 23, 1971) regarding steam-generating EGUs); 54 Fed. Reg. 34,008 (Aug. 17, 1989) (amending 39 Fed. Reg. 9308 (Mar. 8, 1974) regarding fluid catalytic cracking unit regenerators); 52 Fed. Reg. 47,826 (Dec. 16, 1987) (amending 51 Fed. Reg. 42,768 (Nov. 25, 1986) regarding commercial-industrial steam generators).

EPA's proposal includes ample information supporting the agency's rational basis for regulating methane from the oil and natural gas sector. Moreover, even if section 111 *did* require an endangerment or cause-or-contribute determination for individual pollutants from a given source category for EPA's regulation of those particular pollutants, the current proposal easily passes legal muster, as it is supported by EPA's 2009 Endangerment Finding; additional information on harmful effects of greenhouse gas emissions included in EPA's methane proposal; as well as information on the contribution of stationary sources in the oil and gas sector to harmful methane pollution.

Response: Comment is a supportive comment to which no response is required.

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider
Commenter Affiliation: Clean Air Task Force et al.
Document Control Number: EPA-HQ-OAR-2010-0505-7062
Comment Excerpt Number: 15

Comment: ***2009 Endangerment Finding.*** In *Massachusetts v. EPA*, the Supreme Court held that the CAA authorizes federal regulation of emissions of greenhouse gases and directed EPA to make a science-based determination as to whether greenhouse gases from motor vehicles endanger public health and welfare. 549 U.S. 497, 528-29 (2007). In December 2009, EPA concluded that emissions of six well-mixed greenhouse gases from mobile sources—including methane— "cause or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009) ("the Endangerment Finding"). The Endangerment Finding was made after an extraordinarily thorough scientific review and careful consideration of public comments. It was reaffirmed after full consideration of petitions for reconsideration and was upheld in its entirety by the D.C. Circuit in the face of a vigorous industry challenge. *Coal. for Responsible Regulation, Inc. v. EPA (CRR I)*, 684 F.3d 102, 116-27 (D.C. Cir. 2012), a*ff'd in part, rev'd in part sub nom. Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427 (2014) *and amended sub nom. Coal. for Responsible Regulation, Inc. v. EPA (CRR II)*, 606 F. App'x 6 (D.C. Cir. 2015). The court found that the Endangerment Finding was procedurally sound, consistent with Supreme Court case law, and amply supported by the administrative record, observing that "[t]he body of scientific evidence marshaled by EPA in support of the Endangerment Finding is substantial." *Id.* at 120. And while it granted certiorari on one component of the D.C. Circuit's holding in *CRR I*, the Supreme Court declined to review any aspect of the lower court's holding on the Endangerment Finding. *See Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 418, 2013 U.S. LEXIS 7380 (Oct. 15, 2013).

The 2009 Endangerment Finding fully satisfies any requirement for an endangerment finding under section 111, not only for proposed subpart OOOOa, but for any other listed source category for which EPA may set greenhouse gas standards going forward. EPA made very clear in 2009 that the endangerment component of its finding rule applied generally to the sum total of all anthropogenic greenhouse gas "air pollution," irrespective of the sources from which the

individual "air pollutants" were emitted. *See, e.g.*, 74 Fed. Reg. 66,496, 66,506 (Dec. 15, 2009) ("[T]he Administrator is to consider *the cumulative impact* of sources of a pollutant in assessing the risks from air pollution, and is not to look only at the risks attributable to a single source or class of sources." This distinction originates in the CAA itself. Section 202(a)(1) provides that

[t]he Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any *air pollutant* from any class or classes of new motor vehicles or new motor vehicle engines, which in [her] judgment cause, or contribute to, *air pollution* which may reasonably be anticipated to endanger public health or welfare.

42 U.S.C. § 7521(a)(1) (emphasis added). Thus, the statutory provision applied in the 2009 Endangerment Finding required EPA to consider whether "air pollution" may reasonably be anticipated to endanger, not the "pollutant" itself. As EPA explained, to help appreciate the distinction between air pollution and air pollutant, the *air pollution* can be thought of as the total, cumulative stock in the atmosphere, while the *air pollutant* can be thought of as the flow that changes the size of the total stock.

74 Fed. Reg. at 66,536 (emphasis in original).

EPA therefore determined in 2009 that the "total, cumulative stock" of GHGs—not just mobile source emissions—could reasonably be anticipated to endanger public health and welfare. And as the Endangerment Finding makes clear, the total, cumulative stock of GHGs includes atmospheric methane resulting from man-made activities. In the Finding, EPA cites methane as the second-largest well-mixed GHG on a CO2-equivalent basis, after carbon dioxide itself. *Id.* at 66,549. EPA further notes that "[t]he global atmospheric concentration of methane has increased by 149 percent since pre-industrial levels (through 2007)[,] . . . [and] [t]he observed concentration increase in th[is] gas can . . . be attributed primarily to anthropogenic emissions." *Id.* at 65,517. In comparison, global concentrations of carbon dioxide have increased by 38 percent since pre-industrial times and nitrous oxide by 23 percent—large increases, to be sure, but several times smaller than the corresponding increase in atmospheric methane. *Id.*

In short, EPA's 1979 oil and gas category listing provides the agency with all the endangerment determination it needs to proceed with the proposed methane rule. To the extent that EPA must articulate a rational basis for regulating methane emissions from this sector under section 111, the 2009 Endangerment Finding and the agency's current data on the magnitude of methane emissions from this sector are more than sufficient to justify EPA's proposal. No additional endangerment finding—whether source-specific or pollution-specific—is required or needed.

Response: See the response for DCN EPA-HQ-OAR-2010-0505-7062, Excerpt 14.

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider
Commenter Affiliation: Clean Air Task Force et al.

Document Control Number: EPA-HQ-OAR-2010-0505-7062
Comment Excerpt Number: 16

Comment: ***EPA's Proposed Rule and Additional Information.*** Information from EPA's 2013 GHGI further emphasizes the problem of methane emissions from oil and gas sources in the United States. The GHGI reports domestic methane emissions in 2013 of 636.3 million metric tons CO2e, second only to CO2 and approximately 9.5 percent of all domestic GHG emissions from human sources. However, as discussed above, this figure relies on a global warming potential of just 25—the IPCC's 100-year figure from the Fourth Assessment Report. Re-calculating this total using the IPCC's updated 100-year GWP for methane of 34 results in an increase of domestic methane emissions by 865.4 million metric tons CO2e (12.5 percent of all GHG emissions). Using the updated 20-year GWP of 86—the most appropriate factor, as described above— increases the total to 2,189.9 million metric tons CO2e, or 26.6 percent of all domestic GHGs in 2013. Together, oil and gas sources are the single largest contributor of methane in the U.S., accounting for nearly 30 percent of domestic emissions according to the GHGI. And, as discussed previously, top-down studies suggest that the true contribution from these sources is considerably higher. Therefore, EPA's findings strongly support the conclusion that methane emissions from oil and gas sources are a major contributor to atmospheric concentrations of well-mixed greenhouse gases. Even if section 111 were interpreted to require that EPA formally find a source category "significantly contributes" to endangering air pollution with respect to each regulated pollutant it emits, the findings in the proposed rule with respect to the large volume of methane emissions from the oil and gas sector would more than satisfy such a requirement.

Response: The EPA has reviewed the suggestion to use the IPCC AR5 GWPs when calculating inventories, but has determined that the benefits of comparability and consistency with other international and domestic inventories support the continued use of AR4 GWPs at this time. The EPA disagrees that the 20 year GWP is more appropriate than the 100 year GWP – see the response to DCN EPA-HQ-OAR-2010-0505-7000, Excerpt 1.

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider
Commenter Affiliation: Clean Air Task Force et al.
Document Control Number: EPA-HQ-OAR-2010-0505-7062
Comment Excerpt Number: 17

Comment: EPA Has Authority to Issue Its Proposed Methane Standards Under a New Subpart OOOOa, Regardless of Any Overlap With the 2012 VOC Regulations.

EPA Must Issue Methane Standards for All Oil and Gas Sources, Including Those Covered Under the 2012 VOC NSPS.

We support EPA's decision to promulgate its proposed methane standards under part 60, subpart OOOOa. After listing a source category under section 111, EPA is empowered to issue new source performance standards for any pollutant emitted by that source category so long as it has a

rational basis for doing so. As noted above, EPA has developed—and the D.C. Circuit has upheld—a voluminous administrative record affirming beyond question that greenhouse gases, including methane, endanger the public health and welfare. The oil and gas industry is the largest source of anthropogenic methane emissions in the United States. The agency's decision to regulate methane emissions from this sector under section 111 is, therefore, wholly rational.

In the VOC rulemaking process, many stakeholders—including Joint Environmental Commenters—urged EPA to issue section 111 standards for methane in addition to VOC, given the severe climate-forcing impacts of this pollutant and the growing problem of methane emissions from the oil and gas industry. EPA determined that it lacked sufficient data on methane emissions from oil and gas sources to proceed with a rulemaking at that time while noting its intention to collect additional data through the Greenhouse Gas Reporting Program. 77 Fed. Reg. 49,490, 49,513-14 (Aug. 16, 2012). EPA now states that it has collected valuable data through the Reporting Program since that program began in September 2012, and that these data confirm that sector wide emissions are both substantial and expected to increase in the coming years as the industry expands. 80 Fed. Reg. at 56,599. For these reasons, EPA now believes it has proper grounding to proceed with direct methane standards for oil and gas sources. While we maintain that the Clean Air Act required EPA to regulate methane in 2012 or earlier, we affirm that post-2012 Reporting Program data (as well as other data gathered and/or made available since 2012) provide the agency with a rational basis to issue the proposed rule

Response: The EPA considered the information provided by the commenter, and finds that it is consistent with the approach that EPA has taken in this action.

Commenter Name: P. DeMarco
Commenter Affiliation: Citizen
Document Control Number: EPA-HQ-OAR-2010-0505-5167
Comment Excerpt Number: 3

Comment: I support the EPA's efforts to regulate the oil and gas development industry as part of the 2009 Endangerment Finding, where the EPA Administrator found that the current, elevated concentrations of greenhouse gases in the atmosphere—already at levels unprecedented in human history—may reasonably be anticipated to endanger public health and welfare of current and future generations in the United States. In your background of the regulation you state:

"As Earth continues to warm, it may be approaching a critical climate threshold beyond which rapid and potentially permanent—at least on a human timescale—changes not anticipated by climate models tuned to modern conditions may occur."
http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2010-0505-4776

In the face of such dramatic findings, the regulations proposed here have the effect of putting a Band-Aid on a hemorrhage.

Response: Comment is a supportive comment to which no response is required.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 5

Comment: Direct Regulation of Methane is Unlawful

Issue – Section 111 of the Clean Air Act (CAA) requires the Agency to list a category of stationary sources if, in the Administrator's judgment, the category "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." CAA §111(b)(1)(A). It is unlawful for EPA to regulate only methane from oil and natural gas sources based on an endangerment finding that is largely attributable to other GHG pollutants from non-stationary sources. In the 2009 endangerment finding for motor vehicles, EPA found that "carbon dioxide is expected to remain the dominant anthropogenic greenhouse gas, and thus driver of climate change." See, e.g., 74 Fed. Reg. at 66519. Given that EPA concluded that carbon dioxide from motor vehicles—not methane— is the "driver of climate change," EPA cannot rely on that past finding in a rule that regulates only methane. EPA has not shown that there is a rational basis for concluding that methane, a single element of the aggregate pollutant GHGs, meets the endangerment standard called for in the CAA, or that upstream oil and natural gas sources are a significant contributor of methane. Both showings are legal prerequisites before EPA may propose Subpart OOOOa.

Recommendation – EPA must make both an endangerment and significant contribution finding for each pollutant that it seeks to regulate for a given source category. In this case, an endangerment finding must be made for methane specifically, and a significant contribution finding must be made for the proposed covered sources.

Response: See the response for DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 6.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 6

Comment: EPA CANNOT RELY ON AN ENDANGERMENT FINDING FOR A COLLECTION OF SIX GREENHOUSE GASES TO REGULATE ONLY METHANE

Section 111 requires the Agency to list a category of stationary sources if, in the Administrator's judgment, the category "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." *Id.* § 111(b)(1)(A). This requires

the Agency, first, to make an "endangerment finding" that the air pollution it intends to regulate from that source category "may reasonably be anticipated to endanger public health or welfare." *Id.* Next, the agency must determine that the source category "causes, or contributes significantly to" that air pollution. *Id.* These threshold findings are required before EPA proposes new standards for existing source categories.

In December 2009, EPA made an endangerment finding for motor vehicles under section 202(a) of the Clean Air Act in which the Agency determined that "six greenhouse gases *taken in combination* endanger both the public health and the public welfare . . . ." 74 Fed. Reg. 66496, 66497 (Dec. 15, 2009) (emphasis added). EPA "[s]pecifically . . . define[d] the 'air pollution' referred to in CAA section 202(a) to be the *mix of six long-lived and directly-emitted greenhouse gases* . . .," *id.* at 66497 (emphasis added), in the "aggregate," *id.* at 66519. EPA made clear that "the air pollution is the *combined mix* of six key directly-emitted, long-lived and well-mixed greenhouse gases . . . ." *Id.* at 66516 (emphasis added). The six greenhouse gases included in the aggregate in EPA's section 202(a) endangerment finding were carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). *Id.*

In the proposal here, EPA "identifies the air pollutant that it proposes to regulate as the pollutant GHGs . . . ." *Id.* at 56601. EPA explains that of the "six well-mixed GHGs . . . only two of these gases—CO2 and methane—are reported as non-zero emissions for the oil and natural gas production sources and natural gas processing and transmission sources that are being addressed within this rule." *Id.* at 56607-08. As EPA admits, however, "only methane will be reduced directly by the proposed standards." *Id.*

It is unlawful for EPA to regulate only methane based on an endangerment finding that is largely attributable to other pollutants. Of the six greenhouse gases, carbon dioxide is emitted in vastly greater quantities (even on a carbon dioxide equivalent basis) than methane. In the 2009 endangerment finding for motor vehicles, EPA recognized this, finding that "carbon dioxide is expected to remain the *dominant anthropogenic greenhouse gas, and thus driver of climate change*." *See, e.g.*, 74 Fed. Reg. at 66519. Given that EPA concluded that carbon dioxide—not methane— is the "driver of climate change," EPA cannot rely on that past finding in a rule that regulates only methane. EPA has not shown that there is a rational basis for concluding that methane, a single element of the aggregate pollutant GHGs, meets the endangerment standard called for in the statute.

Response: Regarding the assertion that the EPA must make an endangerment finding for methane as an individual gas, the EPA addressed this assertion in the preamble to the final rule. See section VIII.B (Summary of Significant Comments and Responses – Major Comments Concerning EPA's Authority to Establish GHG Standards in the Form of Limitations on Methane Emissions). In addition, the EPA explained its approach on this matter in section IV.D of the preamble to the final rule (Establishing GHG standards in the Form of Limitations on Methane Emissions). Within that section of the preamble, the EPA's discussion of Clean Air Act section 111(b) addresses this comment. An endangerment finding is only required when the EPA lists a source category under section 111(b)(1)(A). Nothing in section 111 requires that the EPA

make further endangerment findings with respect to each pollutant that it regulates under section 111(b)(1)(B).

The EPA is not relying on the 2009 endangerment finding to be an endangerment finding for this rule. Instead, EPA is considering the information and analysis in the 2009 endangerment finding, along with the more recent information that confirms and expands on that finding, to support its conclusions. Further, if an endangerment finding is required, then the information and analysis in the 2009 finding, along with more recent information that confirms and expands on that finding, support a finding that methane endangers human health and welfare.

As further context, according to the IPCC 5th Assessment Report (www.ipcc.ch), historical methane emissions contribute the 2nd most warming today of all the greenhouse gases (0.97 W/m2), after carbon dioxide (1.68 W/m2). This makes methane emission reductions an important contribution to reducing the atmospheric concentrations of the six well-mixed greenhouse gases.

The EPA does not need to make an Endangerment Finding for methane alone: the Endangerment Finding that defines the aggregate group of six well-mixed gases as the air pollution clearly encompasses emissions of any individual component of that aggregate group.

Excerpt from the 2009 Finding (74 Fed. Reg. at 66,541):

> It is reasonable to define the air pollutant under CAA section 202(a) to include substances that have similar attributes (as discussed above), even if not all of the substances that meet that definition are emitted by motor vehicles. For example, as commenters note, EPA has heavy duty truck standards applicable to VOCs and PM, but it is highly unlikely that heavy duty trucks emit every substance that is included in the group defined as VOC or PM. See 40 CFR 51.100(s) (defining volatile organic compound (VOC) as 'any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions', a list of exemptions are also included in the definition); 40 CFR 51.100(oo) (defining particulate matter (PM) as 'any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers').
>
> In this circumstance the number of substances included in the definition of well-mixed greenhouse gases is much smaller than other 'group' air pollutants (e.g., six greenhouse gases versus hundreds of VOCs), and CAA section 202(a) sources emit an easily discernible number of these six substances. However, this does not mean that the definition of the well-mixed greenhouse gases as the air pollutant is unreasonable. By defining well-mixed greenhouse gases as a single air pollutant comprised of six substances with common attributes, the Administrator is giving effect to these shared attributes and how they are relevant to the air pollution to which they contribute. The fact that these six substances share these common, relevant attributes is true regardless of the source category being evaluated for contribution. Grouping these six substances as one air pollutant is reasonable regardless of whether a contribution analysis is undertaken for CAA section 202(a) sources that emit one subset of the six substances (e.g., carbon

dioxide, CH4, N2O and HFCs, but not PFCs and SF6), or for another category of sources that may emit another subset. For example, electronics manufacturers that may emit N2O, PFCs, HFCs, SF6 and other fluorinated compounds, but not carbon dioxide or CH4 unless there is on-site fuel combustion. In other words, it is not necessarily the source category being evaluated for contribution that determines the reasonableness of defining a group air pollutant based on the shared attributes of the group."

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 7

Comment: EPA MUST MAKE AN ENDANGERMENT AND SIGNIFICANT CONTRIBUTION FINDING FOR EACH POLLUTANT THAT IT SEEKS TO REGULATE FOR A GIVEN SOURCE CATEGORY

EPA sets forth a so-called "rational basis" approach to the regulation of pollutants under section 111 under which it asserts that an endangerment and significant contribution finding based on *one* pollutant emitted by a source category broadly gives EPA the ability to regulate *any* pollutant emitted from that source category. EPA claims that:

[O]nce the EPA has determined that the source category causes, or contributes significantly to, air pollution that may reasonably be anticipated to endanger public health or welfare, and has listed the source category on that basis, the EPA interprets section 111(b)(1)(A) to provide authority to establish a standard of performance for *any* pollutant emitted by that source category as long as the EPA has a rational basis for setting a standard for the pollutant.

80 Fed. Reg. at 56601 (emphasis added). EPA bases its position on three claims. First, EPA argues that the Agency is not required to make a new endangerment finding with regard to the source category because it is not listing a new source category. *Id.* In EPA's view, section 111(b)(1)(A) requires an endangerment finding only in order to initially list a source category. *Id.* Second, EPA argues that EPA has discretion, in what it determines to be a statutory gap, to specify what pollutants should be regulated once a source category is listed. *Id.* Third, EPA claims that past Agency practice supports this approach. *See id.* ("EPA has previously interpreted this provision as granting it the discretion to determine which pollutants should be regulated."). As such, EPA "believes that the 1979 listing of this source category provides sufficient authority for this action . . . ." *Id.*

EPA's interpretation directly contradicts the plain language of section 111(b)(1)(A) of the Clean Air Act. That section requires EPA to list a category of stationary sources if, in the Administrator's judgment, the category "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." CAA § 111(b)(1)(A). This section unambiguously requires EPA to list and regulate according to endangerment and significant contribution findings for particular pollutants. EPA mistakes its

source of authority for an unlimited grant of authority. Read in context, the statute permits EPA to regulate stationary sources that emit pollutants that may reasonably be anticipated to endanger public health or welfare *for those pollutants* which led to the endangerment finding and to which the source category significantly contributes. It does not grant EPA unlimited authority to regulate *any* pollutant emitted by that source. *See Mich. v. EPA*, 268 F.3d 1075, 1081 (D.C. Cir. 2001) ("EPA is a federal agency—a creature of statute. It has . . . only those authorities conferred upon it by Congress . . . . [I]f there is no statute conferring authority, a federal agency has none.").

Even if the statute were ambiguous, EPA's interpretation of the statute is unreasonable. EPA claims that the statute is silent as to what pollutants should be the subject of standards from the source category, and "in the absence of specific direction or enumerated criteria in the statute concerning what pollutants from a given source category should be the subject of [a] standard, it is appropriate for EPA to exercise its authority to adopt a reasonable interpretation of this provision." 80 Fed. Reg. at 56593, 56601. Into this alleged statutory silence, EPA injects the "authority to establish a standard for performance for *any pollutant* emitted by that source category as long as the EPA has a rational basis for setting a standard for the pollutant." *See id.* (emphasis added). Regulating any pollutant emitted from a source category based on an endangerment and significant contribution finding for just a single pollutant is manifestly unreasonable. EPA may not simply substitute a "rational basis test," which is not contained in Section 111 of the Clean Air Act, for its more stringent requirements.

Under the Agency's interpretation, EPA's regulation of *any* pollutant is limited only by EPA's prior determination that *an entirely different pollutant* endangers public health or welfare, that the source category's emissions of that different pollutant contribute significantly to that endangerment, and that there is somehow a "rational basis"—words not found in section 111—to regulate other pollutants. This is not a test. It is an unlimited grant of authority for EPA to be the final arbiter of whether to regulate pollutants for which it has not made the necessary statutory findings.

After a single endangerment and contribution finding, EPA could for all intents and purposes regulate any pollutant from that source regardless of whether the source contributed significantly to the endangerment in question. This is not what Congress intended when it established such a high bar for regulation under section 111(b). *See* CAA § 111(b)(1)(A). EPA's interpretation is untethered from the statute, adrift in an unlimited "rational basis test" of the Agency's own creation. This is a patently unreasonable interpretation of the statute.

EPA's position is even more untenable because it relies on a cause-or-contribute significantly finding made for a different pollutant over thirty years ago. A significant period of time has passed since EPA made its finding. EPA's original finding for this source category may no longer be valid. Regulating methane on the basis of a finding made many years earlier that the source category contributed significantly to endangering pollution of another kind without an independent examination and analysis of the pollutant that EPA intends to regulate is arbitrary and capricious.

Response: The EPA does not agree with commenter's interpretation of Clean Air Act section 111(b)(1)(A). Please see section IV.D of the preamble to the final rule regarding the relationship of an endangerment finding to a source category.

Moreover, the EPA disagrees with commenter's assertion that the Agency's rational basis approach is improper. The commenter mischaracterizes the role that the EPA's rationale basis analysis plays in deciding what pollutants will be regulated under section 111(b)(1)(B). As discussed in section IV.D of the preamble to the final rule, the EPA has applied the rational basis analysis in the past to conclude that it would not regulate certain pollutants that are emitted from the source category. By considering whether there is a rational basis to regulate a given pollutant from a listed source category, the EPA ensures that it regulates pollutants that warrant regulation.

The EPA's interpretation to look to the same factors as an endangerment finding is both true to the statute and common sense. First, the EPA believes that looking to the same considerations that Congress identified for the endangerment finding in section 111(b)(1)(A) when it applies the rational basis analysis under section 111(b)(1)(B) supports, rather than contradicts, the reasonableness of the EPA's approach. Second, the EPA's view is that the harm imposed by a pollutant and the amount of emissions of a pollutant are common-sense considerations in determining which pollutants should be regulated.

Contrary to commenter's assertions, the use of the phrase "rational basis" does not indicate that the EPA has created a new test outside the boundaries of the Clean Air Act. Instead, the EPA's use of the phrase "rational basis" in the preamble merely explains how the agency's actions are supported by the record and is a reasonable exercise of the EPA's broad authority under section 111. The rational basis analysis is meant to assist the reader in understanding that the EPA's actions are supported by reason, logic, and fact. The agency uses the text of the preamble to explain to the public how it arrived at the conclusions that it relied upon to support the final action. This approach demonstrates that the agency's action is not arbitrary by explaining exactly how the EPA came to make certain decisions.

The EPA also disagrees with commenter's assertion that the Agency cannot rely on the 1979 category listing because it is outdated. The Clean Air Act does not require that the EPA re-visit category listings that were made previously.

Commenter Name: Rodney Sartor
Commenter Affiliation: Enterprise Products Partners L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6807
Comment Excerpt Number: 2

Comment: EPA cannot justify the direct regulations of methane emissions from the oil and gas sector.

EPA may only issue regulations under its NSPS program after making a finding—known as an endangerment finding—that pollutant and category of pollution sources cause or contribute

to endangering public health or welfare. EPA has not yet done so, and therefore has no statutory authority to issue this proposed NSPS. Enterprise respectfully disagrees with EPA's assertion that Section 111(b)(1)(A) of the Clean Air Act does not require a separate endangerment finding before EPA may directly regulate methane from the oil and gas industry. This section of the Act states that the EPA Administrator:

"….shall include a *category of sources* in such list if in his judgment it *causes, or contributes* significantly to, air pollution which may reasonably be anticipated *to endanger public health or welfare*."

Enterprise submits that this provision is best read to require a specific finding by the EPA Administrator that the oil and gas sector's methane emissions cause or contribute to the endangerment of public health or welfare. EPA has not yet made a specific finding that methane, standing alone, causes or contributes to the endangerment of public health or welfare, let alone a finding that methane emissions from the oil and gas industry "may reasonably be anticipated to endanger public health or welfare."

It is important to note that EPA is proposing to regulate methane purely based on the contribution that EPA asserts that this particular gas has on climate change, and not because the methane emissions from oil and gas operations are alleged to have any other stand-alone impact on human health or the environment. Methane is a naturally occurring gas which results from the decay of organic matter. Methane is not toxic, and does not accumulate in the body. Indeed, the only real risks that it poses are that it is flammable when present in high concentrations, and inhaling high levels can cause oxygen deprivation.

In the preamble to the proposed NSPS, EPA asserts that it is regulating methane based on its 2009 endangerment finding for motor vehicles, in which EPA found that "six well-mixed GHGs—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride— endanger both the public health and the public welfare of current and future generations by causing or contributing to climate change." EPA has not made a specific finding that methane, standing alone, causes or contributes to climate change. Indeed, EPA found that carbon dioxide—not methane—"is expected to remain the dominant anthropogenic greenhouse gas, and thus driver of climate change." As EPA has acknowledged, carbon dioxide is emitted in vastly greater quantities (even on a carbon dioxide equivalent basis) than methane.

In the current NSPS proposal, EPA "identifies the air pollutant that it proposes to regulate as the pollutant GHGs . . . ." EPA explains that of the "six well-mixed GHGs . . . only two of these gases—CO2 and methane—are reported as non-zero emissions for the oil and natural gas production sources and natural gas processing and transmission sources that are being addressed within this rule." As EPA admits, however, "only methane will be reduced directly by the proposed standards." As a result, EPA cannot rely on its 2009 endangerment finding as the basis of a rule, like this one, that regulates only methane. EPA has not shown that there is a rational basis for concluding that methane alone meets the endangerment standard called for in the statute. It is therefore unlawful for EPA to regulate only methane based on an endangerment finding that is largely attributable to other pollutants. As a result, EPA must issue a new endangerment finding, based on the impact of methane alone, before issuing a final rule.

Even if EPA's 2009 endangerment determination could support the direct regulation of methane emissions, the plain text of Section 111(b)(1)(A) requires that the EPA Administrator make a separate finding that the methane emissions from the category of sources that it wishes to regulate also significantly causes or contributes to the endangerment of human health or welfare. The Clean Air Act requires EPA to make separate findings under a number of its different provisions. Congress did this for a reason: by requiring that EPA first find that emissions from a specific pollutant from a particular source category endangers the public, Congress ensured that the EPA would only promulgate rules to address proven problems, and therefore avoid potentially unnecessary regulation.

The NSPS provisions found at Section 111(b)(1)(A) have a separate and distinct endangerment finding requirement than the one used for EPA's mobile source program. EPA's 2009 endangerment finding was made under Section 202 of the Clean Air Act, which requires EPA to regulate tailpipe emissions whenever the EPA Administrator finds that car emissions "cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health and welfare." As noted above, the NSPS provision found at Section 111(b)(1)(A) specifically requires a finding that the *category of sources significantly* cause or contribute to the endangerment of human health or welfare. This separate requirement in the Act indicates two things. First, it shows that EPA must make an independent finding in order to regulate an air pollutant under the NSPS provisions of the Clean Air Act. Second, it indicates that EPA must make a different and more specific finding than it did in 2009. Here, the finding must be specific to the source category, and it must show that the source category is a *significant* contributor to the endangerment. In order to give effect to all of the language included in the statute, EPA must make this separate finding before it can regulate methane from the oil and gas source category.

Given the diminutive amount of total GHG emissions attributable to methane emissions from the oil and gas industry generally, and the midstream sector in particular, Enterprise does not believe EPA can make this finding. In the preamble to the proposed NSPS, EPA acknowledged that, in total, the methane emissions from the entire oil and gas sector account for only 3% of total U.S. domestic GHG emissions, just over 2% of the total U.S. GHG Inventory, and 0.3% of Global GHG emissions. Emissions from the transmission and storage sector account for just over a third of the emissions from the entire oil and gas sector, meaning that the total contribution from this sector is a negligible 1% of total U.S. domestic GHG emissions and 0.1% of Global GHG emissions. As a result, the oil and gas sector do not *significantly* cause or contribute to climate change as required by the statute.

EPA simply cannot use an endangerment finding for mobile sources under one provision in the Clean Air Act related to six "well mixed" gases to justify the regulation of methane gases from stationary oil and gas sources under the NSPS program. Because EPA has not found that methane from this category of oil and gas sources causes or contributes significantly to the endangerment of public health or welfare, it has no statutory basis for promulgating this regulation. Indeed, without a determination that methane emissions from these sources significantly impact public health or welfare, EPA does not even have a rational basis for publishing the proposed NSPS in the first place.

Response: Regarding the assertion that the EPA must make an endangerment finding for methane as an individual gas, see the response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 6.

Regarding the assertion that the rule makes insignificant changes to global emissions, see the response to DCN EPA-HQ-OAR-2010-0505-6957, Excerpt 7.

The commenter also claims that methane is a non-toxic, naturally occurring gas and that the only real risk is that it is flammable. The assertion that methane has no risks beyond flammability is false. While methane is indeed produced from natural sources, the health and welfare risks of elevated concentrations of greenhouse gases (including methane) was detailed in the 2009 Endangerment Finding. Please also see section IV.B of the preamble to the final rule which details the impacts of GHGs emissions on public health and welfare. Moreover, methane is a precursor to ozone formation, which also impacts human health. The EPA has considered the information provided by the commenter and finds that it does not provide credible evidence of flaws in the EPA's conclusions.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 5

Comment: Moreover, EPA has not made the requisite cause-or-contribute and endangerment findings for the single pollutant methane as emitted by oil and gas sources. In the preamble, EPA notes that *its* 2009 "Endangerment Finding" concluded that the overall mixture of six GHGs (one of which was methane) from motor vehicles, taken in combination, endangers public health and welfare. However, the 2009 Endangerment Finding did not address methane standing alone, nor did it reach any conclusion about the health or environmental effects of methane emitted by stationary sources in the oil and natural gas source category.

The 2009 Endangerment Finding cannot form the basis for a new methane NSPS because Section 111 requires, as a predicate to the Subpart OOOOa NSPS, that EPA make a new finding that methane emissions, standing alone, create air pollution that endangers public health or welfare, and further that methane emissions from the oil and natural gas source category cause or contribute significantly to that endangerment. The 2009 Endangerment Finding does not come to any such conclusion; therefore, the 2009 Endangerment Finding - which considered the impact of a *mixture* of GHGs and was made with respect to emissions from *mobile sources* - cannot serve as justification for EPA's new regulation of methane from oil and gas stationary sources in proposed Subpart OOOOa.

EPA acknowledges that endangerment findings and cause-or-contribute findings are prerequisites for listing a new source category under section 111(b). EPA contends, however, that such findings need not be made when EPA is issuing NSPS for a new pollutant (such as methane) emitted by a source category that has already been listed (such as the oil and natural

gas source category). Under EPA's view, once a source category has been listed, EPA is free to add new NSPS for additional pollutants emitted by that source category, unencumbered by any obligation to satisfy Section 111(b)'s requirements related to endangerment or cause-or contribute findings with respect to those newly covered pollutants.

EPA's position is incorrect and unsupported by any language in the Clean Air Act. Taken to its logical conclusion, EPA's position would allow the agency to impose NSPS for new pollutants from existing source categories without any regard for whether those newly regulated pollutants had any detrimental environmental or health impacts. This would be directly contrary to the basic tenet of the Clean Air Act, which is to protect and enhance the quality of the nation's air resources. The Clean Air Act is not intended to regulate pollutants that are harmless, yet that is the result that could be reached under a view of Section 111 that dispenses with the need for an endangerment finding with respect to a new pollutant emitted from an existing source category. EPA's interpretation of Section 111 is illogical and contrary to the basic purpose of the Clean Air Act; the logical interpretation of Section 111(b) is that EPA cannot establish NSPS for a particular pollutant unless and until it has made a cause-or-contribute finding and an endangerment finding with respect to the particular pollutant at issue, in this case methane.

EPA takes the position that it may promulgate NSPS for a new pollutant from an existing source category as long as there is a "rational basis" for doing so -a standard that EPA claims is satisfied in the present case. However, EPA is unable to point to any provision in the Clean Air Act supporting EPA's view that it may dispense with Section 111(b)'s requisite endangerment and cause-or-contribute findings and substitute an agency-created "rational basis" standard in their place. EPA may not act as though Section 111(b) does not exist, nor may the agency substitute a less onerous "rational basis" standard for the actual standards required by Congress.

In sum, EPA's proposed new NSPS rules for the single pollutant methane are contrary to the Clean Air Act, and should be withdrawn, for two reasons: (1) EPA has failed to make a finding that methane emissions, in and of themselves, endanger public health or welfare, and (2) EPA has failed to show that methane emissions from oil and natural gas sources cause or significantly contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. Such findings are a prerequisite to the promulgation of NSPS for methane emissions from the oil and natural gas source category.

Response: For a response to the argument that EPA cannot regulate methane as a single gas, see the response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpts 6 and 7.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs
Commenter Affiliation: Western Energy Alliance
Document Control Number: EPA-HQ-OAR-2010-0505-6930
Comment Excerpt Number: 7

Comment: EPA takes the position that "section 111(b)(1)(A) does not require another [endangerment] determination as a prerequisite for regulating a particular pollutant" and that

such pollutant may be regulated "as long as the EPA has a rational basis for setting a standard for the pollutant." 80 Fed. Reg. at 56,601. The preamble goes on to state that "because the EPA is not listing a new source category in this rule, the EPA is not required to make a new endangerment finding with regard to oil and natural gas source category in order to establish standard of performance for the methane from those sources." *Id.* The Alliance respectfully disagrees with EPA's characterization of the applicable standard and its position regarding section 111. While it is true that section 111 operates differently than Title II of the CAA and sections 202(a)(1), 211(c)(1), and 231(a)(2)(A) with respect to endangerment, section 111 is not devoid of similar Congressional intent or language.

EPA acknowledges in this rule that endangerment under section 111 of the CAA "is based on determinations as to the health or welfare impacts of the pollution to which the source category's pollutants contribute, and as to the significance of the amount of such contribution." *Id.* (emphasis added). The statute bears this out, allowing a category of sources to be listed if "it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7411(b)(1)(A). Thus, to list the source category, EPA initially established a nexus between pollutant emissions from the source category and public health and environmental benefits from such regulation. This involved consideration of whether the source contributed significantly to air pollution. As a matter of sound public policy and good-governance, and in light of the governing objectives of the statute, there should be a similar nexus required before regulating additional pollutants from that source, particularly where those pollutants were not even known or contemplated at the time of the listing decision.

On this latter point, the initial listing decision is 36 years old. Remarkable changes have occurred across this industry, which by EPA's acknowledgment, have dramatically reduced air emissions. In order to justify regulating GHGs from this sector, section 111 of the CAA, the APA, and sound public policy demand that EPA concretely establish that GHG emissions from this single sector are contributing significantly to or causing public health and welfare impacts. Even without what we believe is necessary, *i.e.*, a separate endangerment finding, it certainly requires a more rational and better supported record than being advanced here.

As a legal matter, the preamble misstates and conflates the applicable standard for promulgating this rule (or any rule). The preamble suggests that EPA merely needs to demonstrate a rational basis for its decision to promulgate this rule. 80 Fed. Reg. at 56,601 ("EPA interprets section 111(b)(1)(A) to provide authority to establish a standard for performance for any pollutant emitted by that sources category as long as the EPA has a rational basis for setting a standard for the pollutant."). EPA's position is incorrect and contrary to the plain language of section 111(b)(1)(A) of the CAA, which does not refer to a rational basis test. Rather, that section requires EPA to list a category of stationary sources if, in the Administrator's judgment, the category "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." CAA § 111(b)(1)(A). This section requires EPA to list and regulate according to endangerment and significant contribution findings for particular pollutants and does not provide for a rational basis test.

Furthermore, any agency derives its authority to regulate, in the first instance, from the governing statute—here, the CAA. It is only after the agency has properly exercised that

authority that its decisions are reviewed for rationality and arbitrariness. It is not the case, as the proposal appears to suggest, that an agency can promulgate regulations merely upon a showing that it has a rational basis to do so. Without a separate demonstration that contributions of methane emissions from this industry sector are causing public health and environmental impacts or otherwise contributing significantly to air pollution, the rule goes beyond EPA's statutory authority.

And even if it correctly interprets its statutory authority, it is incorrect in its interpretation of the applicable APA standard. "The standard of review of agency action alleged to be arbitrary and capricious is not simply whether there exists a rational basis for the action. Rather the inquiry is whether the decision was based on a consideration of relevant factors, whether there has been a clear error of judgment and whether there is a rational basis for the conclusions approved by the administrative body." *Mobil Oil Corp. v. Dep't of Energy*, 610 F.2d 796, 801 (Temp. Emergency Court of Appeals, 1979) (citing *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 416 (1971)). Where EPA fails to consider the governing statute's objectives or authority *before* promulgating the rule, its action is beyond its statutory authority. *Id.*

The Alliance does not believe that Congress intended or contemplated the approach taken by EPA here—that is, carte blanche authority to regulate any pollutant from any listed source category merely upon the showing of a "rational basis." Such an approach misstates APA requirements and ignores the specific language of section 111(b) of the CAA and the underlying objective of the CAA "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of the population." 42 U.S.C. § 7401(b)(1). EPA must consider section 111 and the CAA's objectives and do so in a manner consistent with the APA. This requires examining the relevant data and articulating a satisfactory explanation in terms of benefits to public health and welfare that are needed and will result from EPA action. *See Burlington Truck Lines, Inc. v. U.S.*, 371 U.S. 156, 168 (1962). On this record, the proposed rule simply does not meet these well-established standards for rulemaking and stands a very good chance of being struck down on judicial review.

Response: See the responses to DCN EPA-HQ-OAR-2010-0505-6884, Excerpts 6 and 7.

Commenter Name: Don Anderson, Director of Environmental
Commenter Affiliation: MarkWest Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6957
Comment Excerpt Number: 8

Comment: EPA Must Establish More Than Merely a Rational Basis for the NSPS and CTGs Proposals

EPA takes the position that "section 111 (b)(1)(A) does not require another [endangerment] determination as a prerequisite for regulating a particular pollutant" and that such pollutant may be regulated "as long as the EPA has a rational basis for setting a standard for the pollutant." 80 *Fed. Reg.* at 56,601. The preamble goes on to state that "because the EPA is not listing a new

source category in this rule, the EPA is not required to make a new endangerment finding with regard to oil and natural gas source category in order to establish standard of performance for the methane from those sources." *Id.* We respectfully disagree with EPA's characterization of the applicable standard and its position regarding section 111. While it is true that section 111 operates differently than Title II of the CAA and sections 202(a)(1), 211(c)(1), and 231 (a)(2)(A) with respect to endangerment, Section 111 is not devoid of similar Congressional intent or language.

EPA acknowledges in this rule that an endangerment finding "is based on determinations as to the health or welfare impacts of the pollution to which the source category's pollutants contribute, and as to the significance of the amount of such contribution." *Id.* (emphasis added). The statute bears this out, allowing a category of sources to be listed if "it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7411 (b)(1)(A). Thus, to list the source category, EPA initially established a nexus between pollutant emissions from the source category and public health and environmental benefits from such regulation. This involved consideration of whether the source contributed significantly to air pollution. As a matter of sound public policy and good-governance, and in light of the governing objectives of the statute, there should be a similar nexus required before regulating additional pollutants from that source, particularly where those pollutants were not even known or contemplated at the time of the listing decision.

On this latter point, the initial listing decision for this source category is 36 years old. Remarkable changes have occurred across this industry, which by EPA's own account have dramatically reduced air emissions. In order to justify regulating GHGs from this sector at this time, section 111 of the CAA, the APA, and sound public policy demand that EPA concretely establish that GHG emissions from this single sector are contributing significantly to or causing public health and welfare impacts. Even without a separate endangerment finding, which this commenter strongly believes is and should now be legally required, a more rational and better supported record for the proposed regulatory action is absolutely essential, but plainly lacking.

Response: See the responses to DCN EPA-HQ-OAR-2010-0505-6884, Excerpts 6 and 7.

Commenter Name: Don Anderson, Director of Environmental
Commenter Affiliation: MarkWest Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6957
Comment Excerpt Number: 9

Comment: As a legal matter, the preamble misstates and conflates the applicable standard for promulgating this rule (or any rule). The preamble suggests that EPA merely needs to demonstrate a rational basis for its decision to promulgate this rule. 80 *Fed. Reg.* at 56,601 ("EPA interprets section 111(b)(1)(A) to provide authority to establish a standard for performance for any pollutant emitted by that source category as long as the EPA has a rational basis for setting a standard for the pollutant.") This may be true as far as it goes, but the analysis skips a vital step. Any agency derives its authority to regulate, in the first instance, from the

governing statute, in this case, the CAA. It is only after the agency has properly exercised that authority that its decisions are reviewed for rationality and arbitrariness. It is certainly not the case, as the proposal appears to suggest, that an agency can promulgate regulations merely upon a showing that it has identified a rational basis on which to do so. It is here that the rule falls terribly short. Without a separate demonstration that contributions of methane emissions from this industry sector are causing public health and environmental impacts or otherwise contributing significantly to air pollution, the rule goes beyond EPA's statutory authority and there is no need to address whether EPA believes it may have a rational basis for proposing a standard of performance.

And even if EPA has correctly interpreted its statutory authority (which MarkWest disputes), the Agency is incorrect in its interpretation of the applicable APA standard. "The standard of review of agency action alleged to be arbitrary and capricious is not simply whether there exists a rational basis for the action. Rather the inquiry is whether the decision was based on a consideration of relevant factors, whether there has been a clear error of judgment and whether there is a rational basis for the conclusions approved by the administrative body." *Mobil Oil Corp. v. Dep't of Energy,* 610 F.2d 796, 801 (Temp. Emergency Court of Appeals, 1979) (citing *Citizens to Preserve Overton Park v. Volpe,* 401 U.S. 402, 416 (1971)). *Mobil Oil* also makes clear that where EPA fails to consider the governing statute's objectives or authority before promulgating the rule, its action is beyond its statutory authority. *Id.*

This commenter does not believe that Congress intended or contemplated EPA's position suggested in the preamble, that it has carte blanche authority to regulate any pollutant from any listed source category merely upon the showing of a rational basis." Such an approach not only misstates fundamental APA requirements, but also ignores the primary objective of the CAA "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of the population." 42 U.S.C. § 7401 (b)(1). EPA must consider section 111 and the CAA's objectives and do so in a manner consistent with the APA. This requires examining the relevant data and articulating a satisfactory explanation in terms of benefits to public health and welfare that are needed and will result from EPA's proposed action. *See Burlington Truck Lines, Inc. v.* U.S., 371 U.S. 156, 168 (1962). On this record, the proposed rule simply does not meet these well-established standards for rulemaking and stands a very good chance of being struck down on judicial review.

Response: See the responses to DCN EPA-HQ-OAR-2010-0505-6884, Excerpts 6 and 7.

Commenter Name: Gretchen C. Kem, Sr. Policy Advisor, Environmental and Sustainable Development
Commenter Affiliation: Pioneer Natural Resources USA, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6998
Comment Excerpt Number: 6

Comment: EPA failed to make an "endangerment finding" for methane

EPA states that, "Once EPA has determined that the source category causes, or contributes significantly to, air pollution that may reasonable be anticipated to endanger public health or welfare, and has listed the source category on that basis, the EPA interprets section 111(b)(l)(A) to provide authority to establish a standard of performance for any pollutant emitted by that source category as long as EPA has a rational basis for setting a standard for a pollutant." [emphasis added] EPA is asserting that since VOCs from oil and gas were found to endanger public health and welfare in original 2012 NSPS rule, then methane, as a pollutant emitted from this source category, would be as well and a new endangerment finding need not be made. The flaws in this argument are two-fold.

First, methane on its own is not deemed to be a regulated pollutant that is ripe to be regulated as a stand-alone pollutant to any source category already established under 111(b). Methane was included in the bucket of six GHGs that were made "regulated pollutants" under the tailpipe rule; methane is only one constituent of that combination of six GHGs. Second, a more reasonable interpretation of the statute is that when EPA expands the scope of the source category or the pollutants regulated, EPA must first make a new and separate endangerment finding for that expanded regulation and without such finding, the rule is without legal support. In this case, EPA must make a finding of endangerment for methane and must find a significant contribution of methane to endangerment from this source category. Has methane been deemed to be a significant contributor to the endangerment from this source category? Pioneer agrees with IPAA/AXPC's comments that the science behind anthropogenic global warming and thus the danger of methane emitted from this or other source categories is largely unsettled.

Until this determination is made specifically for methane on its own, and methane emitted specifically from the oil and gas exploration and production sector, and EPA can demonstrate its "rational basis for setting a standard", it can be argued that EPA's proposed rule directly regulating methane is without legal support.

Response: Regarding the assertion that EPA must make an endangerment finding for methane as an individual gas, see the responses to DCN EPA-HQ-OAR-2010-0505-6884, Excerpts 6 and 7.

Regarding the reference to the comments from IPAA/AXPC on the science behind anthropogenic global warming, see the response to DCN EPA-HQ-OAR-2010-0505-6983, Excerpt 48.

Commenter Name: Matthew Hite
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6881
Comment Excerpt Number: 3

Comment: EPA Must Make a Separate Significant Contribution and Endangerment Determination for GHG Emissions from Each Regulated Source Category

EPA cannot proceed with this proposed regulation because it has not satisfied the requirement of first finding that GHG emissions from the oil and natural gas sector cause or contribute significantly to an endangerment of public health or welfare as is required to promulgate these rules under the CAA. Under Section 111(b) of the CAA, EPA may not regulate a pollutant unless and until the agency makes an endangerment determination that is both source- and pollutant-specific and which meets the significance threshold specified in the CAA. Thus, EPA must separately find that methane emissions from the oil and natural gas sector "cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7411(b)(1)(A).

Yet, EPA has not done the analysis to assess whether methane emissions from the oil and natural gas sector create such an endangerment, and relies instead on EPA's endangerment finding for light duty vehicles under Section 202(b) of the CAA. That is insufficient to meet the requirement imposed by the Congress. First, that endangerment finding was not based specifically on the oil and natural gas sector, and thus is irrelevant to the regulated source category here. Under Section 111(b), EPA may only regulate "a category of sources … if in his judgment it causes, or contributes significantly to, air pollution which may be reasonably anticipated to endanger public health and welfare. 42 U.S.C. § 7411(b)(1)(A) (emphasis added). In contrast, other provisions such as Section 202 allow EPA to consider all emissions sources for a given pollutant, authorizing the Administrator to regulate emissions "which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7521(a)(1); see also id. § 7408(a)(1)(A). Thus, Section 111(b) is more demanding than other provisions of the CAA because it requires EPA to make an endangerment determination that is specific to each source category. Second, Section 202(a) of the CAA lacks the more stringent "significance" requirement imposed by the NSPS program under Section 111(b). As EPA has acknowledged, Section 111(b) is different than Section 202 because it requires a source-based determination of endangerment that includes specific finding that emissions from that source category comprise a significant contribution to endangerment. See 74 Fed. Reg. 66,496, 66506 (Dec. 15, 2009) ("[T]he statutory language in CAA section 202(a) does not contain a modifier on its use of the term contribute. Unlike other CAA provisions, it does not require a 'significant' contribution. See, e.g., CAA section 111(b); 2013(a)(2), (4)."). Third, EPA cannot rely on prior endangerment determinations made for the oil and natural gas sector because they did not address methane or any other GHG.

Knowing that it has not made the necessary endangerment finding, the agency argues that it may apply a "rational basis" test in lieu of the statutorily required endangerment determination. See 80 Fed. Reg. at 56,601. This argument is wholly unsupported as a matter of law. First, Section 111(b)(1)(A) does not leave a statutory gap for EPA to fill because the statute is not ambiguous. Section 111(b)(1)(A) expressly limits EPA's authority under NSPS to the regulation and reduction of emissions of significant "air pollution" that "endanger[s] public health and welfare." In contrast, EPA's interpretation would permit the agency to subject source categories to costly regulations under the NSPS program, even if those emissions do not significantly endanger public health and welfare. Thus, the plain language of Section 111(b) of the CAA requires EPA to make a significance endangerment determination that is both pollutant- and source-specific. EPA has not done so here, particularly since GHGs were not even considered a pollutant under the CAA until 2007 at the earliest, see Massachusetts v. EPA, 549 U.S. 497 (2007), which is

long after EPA's Section 111(b) endangerment determination for the oil and natural gas sector. See 80 Fed. Reg. at 56,600 (noting that EPA's endangerment determination for the source category was made in 1979).

Second, the EPA's rational basis test would not be entitled to Chevron deference even if the statute were ambiguous. The EPA asserts that the proposed regulations are justified because the information presented regarding GHG emissions from the oil and natural gas sector, as well as other anthropogenic sources "provides a rational basis for the methane standards [EPA] is proposing in this action." 80 Fed. Reg. at 56,601. But in doing so, EPA ignores the "significance" requirement in Section 111(b) and replaces it with a less stringent standard that is based on EPA's subjective evaluation of health and welfare impacts from global GHG emissions and an assessment of the relative contribution of the oil and gas sector to those alleged impacts. This interpretation is so far removed from the text of Section 111(b) that EPA is not entitled to Chevron deference. This is particularly true since EPA cannot cite a single example outside of the context of NSPS for GHG emissions where anything less than a source- and pollutant specific endangerment determination was required.

Third, as an alternative, EPA appears to suggest that the information it marshals in support of its rational basis standard would suffice to qualify as a Section 111(b) significant contribution endangerment determination for the oil and natural gas sector. 80 Fed. Reg. at 56,601. Such an argument is absurd, since EPA insists that the rational basis test can be applied in the place of a formal significant contribution endangerment determination. EPA's proposed rational basis review falls far short of what Section 111(b) requires. By basing its analysis of endangerment primarily on the agency's prior Section 202(a) endangerment determination, 80 Fed. Reg. at 56,602, EPA fails to address the more stringent significance threshold and source-category determinations that Congress established for Section 111(b). EPA's interpretation is not entitled to deference when it ignores the plain meaning of the statute. See Ohio Pub. Emps. Ret. Sys. v. Betts, 492 U.S. 158, 171 (1989). Further, EPA cannot simply describe the amount of emissions from a given source category as evidence of a significant contribution to endangerment, see 80 Fed. Reg. at 56,606, without providing some quantitative standard against which those emissions can be evaluated. Simply referencing the size of the emissions and asserting that "natural gas and petroleum systems are the largest emitters of methane in the United States," id., cannot provide a reasoned basis for the EPA to determine that those emissions are "significant" within the meaning of Section 111(b). See Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins., 463 U.S. 29, 43 (1983).

Lastly, since EPA has not completed an endangerment determination for methane or GHGs for the oil and natural gas sector, it is impossible to provide a concrete benefit to reducing methane emissions from these proposed sources. The preamble states that "EPA is including requirements for methane emissions in this proposal because methane is a GHG and the oil and gas industry is one of the country's largest emitters," 80 Fed. Reg. at 56,594; however, EPA has not identified what level of methane emissions would result in a measurable reduction of risk to public health or public welfare. Therefore, EPA cannot issue regulations to control methane emissions from the oil and natural gas sector under Section 111(b) of the CAA until it completes an endangerment determination detailing the benefits of reducing methane emissions in the oil and gas industry.

Response: See the responses to DCN EPA-HQ-OAR-2010-0505-6884, Excerpts 6 and 7.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 6

Comment: Even assuming *arguendo* that EPA may promulgate NSPS for methane based merely on a showing that there is a "rational basis" for the NSPS, this rulemaking is still fatally flawed because the rational basis offered by EPA is legally insufficient. EPA contends that there is a rational basis for regulating methane emissions from oil and gas sources because "current methane emissions from this industry contribute substantially to nationwide GHG emissions." As support, EPA asserts that methane is a long-lasting and potent GHG and that reducing methane emissions is an important step in mitigating climate change, which according to the agency is responsible for increased deaths and illnesses as well as the risk of reduced water supplies, increased water pollution, and increased occurrence of extreme events such as floods and droughts.

However, as EPA acknowledges time and again throughout its preamble, the proposed VOC controls are sufficient to control methane emissions. No pollutant-specific controls are proposed for methane emissions throughout the NSPS. Accordingly, EPA has failed to justify the need to expand the NSPS to cover methane emissions when the proposed controls for VOC emissions are already protective and effective in controlling methane. In addition, the oil and gas sector accounts for a very small percent of total GHG emissions in the U.S.; moreover, methane emissions from oil and gas sources are already steadily declining due to controls and voluntary measures that are already in place. Even if EPA is correct that methane emissions from oil and gas sources create a public health issue or cause harm to the environment, it achieves all the stated goals through the regulation and control of VOC emissions.

Response: Some of commenter's assertions have been addressed in responses to DCN EPA-HQ-OAR-2010-0505-6884, Excerpts 6 and 7.

Regarding the assertion that VOC standards are sufficient to control methane, the EPA addressed this assertion in the preamble to the final rule. See section IV.D (Establishing GHG Standards in the Form of Limitations on Methane Emissions).

Regarding the assertions that the oil and gas sector accounts for a very small percent of total GHG emissions in the U.S. and methane emissions from oil and gas sources are already steadily declining, the EPA addressed these assertions in the preamble to this final rule. See section IV.C (GHGs, VOC and SO_2 Emissions from the Oil and Natural Gas Source Category). Moreover, even if total emissions from the sector were declining, the commenter has not demonstrated how such a fact, if true, would negate the need for and/or the benefits of this rulemaking action. For an explanation of the benefits of the final standards, please see section IX.E of the preamble to the final rule.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 9

Comment: EPA's rational basis argument attempting to justify the need to impose new controls on methane emissions in Subpart OOOOa also fails because methane emissions from the oil and natural gas industry are already in decline. EPA data indicates that methane emissions from the oil and gas industry account for only three percent of all CO_2 equivalent ("CO_2e") emissions in the United States, and this small portion of overall CO_2e emissions is declining, due to measures put in place by industry sources to operate in a cleaner and more efficient manner. For example, EPA's report of GHG emissions reported to its GHG reporting program ("GHGRP") showed that methane emissions have steadily gone down in recent years, from 83.6 million metric tons (MMT) CO_2e in 2011, to 80.9 MMT in 2012, to 77.2 MMT in 2013, and finally to 73.0 MMT in 2014. These results are even more remarkable when one considers that the number of facilities reporting to the GHGRP increased over the same period, from 1,918 in 2011 to 2,350 in 2014. It is evident that measures currently being implemented in the oil and gas industry are successfully maintaining methane emissions at steadily declining levels in spite of an increase in activity. EPA has simply demonstrated no rational basis for imposing a comprehensive new regulatory program aimed at addressing sources that collectively account for declining levels of methane emissions.

In sum, even if EPA is correct that it may substitute its "rational basis" standard in place of Section 111's cause-or-contribute and endangerment findings for methane emissions from oil and gas sources, EPA's attempt to establish NSPS for methane still is flawed because there is no rational basis to support the proposed Subpart OOOOa methane standards.

Response: Regarding the assertions that methane emissions from oil and gas sources are already steadily declining, the EPA addressed these assertions in the preamble to this final rule. See section IV.C (GHGs, VOC and SO_2 Emissions from the Oil and Natural Gas Source Category). Specifically, please see Table 4(a) within that section of the preamble which shows that methane emissions from the oil and natural gas industry have risen since 1990. Also, for more information on methane emissions and trends, please see the response to DCN EPA-HQ-OAR-2010-0505-6603, Excerpt 49 (Chapter 12.3 Effects of Voluntary Industry Emission Reduction Efforts).

Moreover, even if total emissions from the sector were declining, the commenter has not demonstrated how such a fact, if true, would negate the need for and/or the benefits of this rulemaking action. For an explanation of the benefits of the final standards, please see section IX.E of the preamble to the final rule.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs
Commenter Affiliation: Western Energy Alliance

Document Control Number: EPA-HQ-OAR-2010-0505-6930
Comment Excerpt Number: 5

Comment: EPA's decision to "directly" regulate methane in these OOOOa amendments is arbitrary and capricious. EPA has not provided any credible evidence on the record demonstrating the need for or the benefits of the rule. The decision to "directly" regulate methane in this proposed rule is confounding and circular, at best. On one hand the proposal concludes that "in light of the current and projected future methane emissions from the oil and natural gas industry, reducing methane emissions from this source category cannot be treated simply as an incidental benefit to VOC reduction." 80 Fed. Reg. at 56,599. Yet, on the other hand the rule concludes that methane reductions are simply an incidental benefit to volatile organic compounds (VOCs) reduction:

> Because VOC control technologies perform the same when used to control methane emissions, the BSER for methane is the same as the BSER for VOC. Therefore, we are proposing performance and operational standards to control methane and VOC emissions for certain emission sources across the source category. These proposed methane standards would require no change to the requirements for currently regulated affected facilities.

80 Fed. Reg. at 56,610 (emphasis added). It appears EPA wants it both ways—representing to the regulated community that the proposed controls are the same best system of emissions reduction (BSER) as currently implemented and are merely needed for "consistency," (*see* 80 Fed. Reg. at 56,599), while in the same breath, trumpeting the rules as groundbreaking and significant for their additional "methane" impacts. *Id.*

While EPA has proposed to regulate several source categories not regulated under the 2012 NSPS (*i.e.*, pneumatic pumps, oil well completions, fugitive leaks), the rest of the rule is duplicative regulation of already-covered sources. Only this time the rule takes credit for direct methane regulation, whereas in 2012 such methane reductions were labeled co-benefits for a lack of quality data. Unlike in 2012, however, this rule is justified almost exclusively on methane benefits and ostensible climate change impacts with only passing reference to VOC and hazardous air pollutant (HAP) reductions. *See e.g.*, 80 Fed. Reg. at 56,597 ("The EPA was unable to monetize all of the benefits anticipated to result from this proposal. The only benefits monetized for this rule are methane related climate benefits." (emphasis added)). Accordingly, we must question whether the rule truly is grounded in sound science regarding public health benefits, or merely advanced in furtherance of EPA's ongoing efforts to appease public critics with respect to climate change regulation.

In contravention of the grounding principles of administrative law, *see Motor Vehicle Mfrs. Ass'n of U.S., v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (requiring EPA to articulate a rational connection between the facts found and the choice made)(emphasis added), this rule appears to be driven by executive fiat rather than scientifically-based facts demonstrating a need to protect public health and the environment. *See* 5 U.S.C. § 706(2)(A) (prohibiting arbitrary and capricious agency action where EPA has not made rational policy decisions on the record and has not adequately articulated the basis for the conclusions

underlying the rule). The preamble allots significant verbiage trying to justify both EPA's legal authority and ostensible policy rationale for the rule. Boiled down to its essence, however, the rule merely attempts to advance executive policy decisions through the guise of the CAA, but is based on slim, if not non-existent, scientific evidence that the rule will actually provide any public health or environmental benefits. Verbosity does not equate to rational articulation. Tellingly, the preamble contains a section "Events Leading to Today's Action," where EPA cites the 2009 GHG Endangerment Finding, President Obama's Climate Action Plan, the follow-up Climate Action Plan: Strategy to Reduce Methane Emissions, and the Administration's new goal to reduce methane emissions from the oil and gas sector by 40-45 percent by 2025—all executive actions "leading to the rule."

Notwithstanding the legal problems with the executive branch relying on its own policy directives, as opposed to statutory authority, to promulgate sweeping regulations, the rule simply does not advance such policies in any meaningful way. In fact, by making natural gas development more expensive and time consuming, the result will be less American natural gas production than without this rule, which is directly at odds with the President's overall climate goals. Specifically, since increased natural gas electricity generation is the primary reason that the United States has reduced Greenhouse Gas ("GHG") emissions, as recognized by the International Energy Agency, the Energy Information Administration and EPA's own data, this rule is actually counterproductive to efforts to address climate change. By focusing on the small picture, the proposed rule is losing sight of the bigger picture.

EPA estimates that the methane reductions forecast to be achieved by the rule will "represent about 2 percent in 2020 and 4 to 5 percent in 2025 of the baseline methane emissions for [the oil and natural gas sector] reported in the U.S. GHG Inventory for 2013." 80 Fed. Reg. at 56,654. EPA does not advance these numbers with much confidence, noting they are based on "predicted activities" and not estimated sector-level emissions or robust emissions inventories. *Id.* EPA also justifies the rule on estimates that oil and gas production will grow by 25 percent by 2025. *See Methane Action Plan Press Release* (January 14, 2015) ("Nevertheless, emissions from the oil and gas sector are projected to rise more than 25 percent by 2025 without additional steps to lower them."); *see also Administration Takes Steps Forward on Climate Action Plan by Announcing Actions to Cut Methane Emissions* (January 14, 2015), https://www.whitehouse.gov/the-pressoffice/2015/01/14/fact-sheet-administration-takes-steps-forward-climate-action-plananno-1; *see also* 80 Fed. Reg. at 56,599 (without further support, citing to "rapid growth of this industry").

EPA has yet to provide any credible data supporting this 25 percent growth projection. To the contrary, methane emissions from oil and natural gas exploration and production (E&P) are 1.07 percent of total U.S. GHG emissions and the natural gas sector alone has reduced methane emissions by 38 percent since 2005. *See EPA, 2014 GHG Reporting Data* (2014). In 2013, "reported methane emissions from petroleum and natural gas systems sector" decreased by 12 percent from 2011, and the largest reduction came from hydraulically fractured natural gas wells (resulting in a decrease of 73 percent in emissions). *Id.* According to a study by the University of Texas, Austin, methane emitted from all upstream source categories at natural gas production sites represents just 0.42 percent of gross natural gas production volumes. On a national scale, despite significant growth in production in this sector over the past several years, methane and

other emissions have continued to decline. EPA's own data bears these decreases out. *See* 80 Fed. Reg. at 56,606-56,607, Tables 2, 3(a) and 3(b) (showing the significant decrease in methane emissions from the oil and gas sector since 1990). In short, EPA's projections about growth and further extrapolations about the significance of this rule are simply not supported by the Agency's own data on this record; yet the rule appears to be grounded in the perceived need to reign in emissions from such growth.

Moreover, underlying these growth projections is a fundamental, yet incorrect, assumption that growth in production in this industry equates to a growth in emissions. *See e.g.*, 80 Fed. Reg. at 56,599 ("These emissions are expected to increase as a result of the rapid growth of this industry.") As we've noted elsewhere, technological and operational improvements in this sector continue to advance at remarkable rates and the emissions profile for new and modifies facilities is declining and will only continue to do so, particularly as operators move towards centralized gathering systems and tankless or pressurized tank facilities. For example, in Colorado, recent emissions inventories for the oil and gas sector demonstrate significant *decreases* (*i.e.*, more than 60 percent through 2017) in VOCs despite a growth in production. *See Overview of 2011 and 2017 VOC and NOx Emission Inventories*, Colorado Regional Air Quality Council, at 7 (November 19, 2015). These decreases are due to advances in technology, facility design, better emissions controls, and the inherent incentive to capture and sell as much methane as possible. New facilities in combination with growing infrastructure and voluntary and state-led emission control efforts are already resulting in decreases in sector emissions. Unlike virtually every other industrial sector, production in upstream E&P sources declines over time bringing with it declining emissions (of both VOCs and methane). The rule appears to ignore these fundamental realities. Until these contradictions are explained, any decision to regulate in the face of such overwhelming data would be unlawful.

Response: Regarding the assertion that VOC standards are sufficient to control methane, please see the EPA's response to DCN EPA-HQ-OAR-2010-0505-6927, Excerpt 6 which includes reference to the preamble section IV.D (Establishing GHG Standards in the Form of Limitations on Methane Emissions).

The EPA disagrees with the information on methane emissions trends presented by the commenter – please see EPA's response to DCN EPA-HQ-OAR-2010-0505-6603, Excerpt 49 (Chapter 12.3 Effects of Voluntary Industry Emission Reduction Efforts) for more details.

Emissions from production of natural gas and petroleum were 176 $MMTCO_2e$ in 2014, or 2.5% of total national emissions, and emissions from natural gas and petroleum production and natural gas processing, transmission, and storage were 3.4% of total national emissions in 2014. The EPA disagrees with the comment that the final NSPS will limit production of natural gas in the U.S. or otherwise produce unreasonable negative impacts on the national economy. On this point, see response to DCN EPA-HQ-OAR-2010-0505-7336, Excerpt 98.

With respect to the decline in emissions from hydraulically fractured natural gas wells in specific, it is relevant to note that this decline was itself a response to the 2012 NSPS, and therefore not relevant support for the commenter's contention that methane emissions decline autonomously. Moreover, even if total emissions from the sector were declining, the commenter

has not demonstrated how such a fact, if true, would negate the need for and/or the benefits of this rulemaking action. For an explanation of the benefits of the final standards, please see section IX.E of the preamble to the final rule.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs
Commenter Affiliation: Western Energy Alliance
Document Control Number: EPA-HQ-OAR-2010-0505-6930
Comment Excerpt Number: 6

Comment: Even if correct, the rule's estimated emissions reductions, based on an unsupported 25 percent growth rate and other incorrect or inaccurate assumptions/methodologies, represent a tiny fraction of all U.S. GHG emissions, and a virtually nonexistent fraction of global GHG emissions. Yet, the rule is justified largely on the basis of avoiding climate change impacts. *See* 80 Fed. Reg. at 56,605 ("[R]educing emissions of GHGs across the globe is necessary in order to avoid the worst impacts of climate change, and underscore the urgency of reducing emissions now."). As EPA notes, in 2013, total methane emissions from the oil and gas industry represented about 3 percent of all CO2 equivalent (CO2(e))emissions in the U.S. *See* 80 Fed. Reg. at 56,654. Of this 3 percent CO2(e), and even assuming EPA's projected methane emissions and reductions supporting this rule are accurate (which we do not believe they are), the rule purports to reduce something much less than half of 3 percent. *See e.g.*, FACT SHEET: Administration Takes Steps Forward on Climate Action Plan by Announcing Actions to Cut Methane Emissions (January 14, 2015), (calling the proposed rule "an important step to get us significantly along the way" to reducing methane emissions from the sector by 40-45 percent). While the rule strongly implies that total domestic contribution of GHGs from this sector is causing adverse climate change impacts, *see* 80 Fed. Reg. at 56,607 (comparing oil and gas GHG emissions with total U.S. GHG emissions "as an indication of the role this sources plays in total domestic contribution to the air pollution that is causing climate change"), the empirical evidence on this record contradicts these assertions. The proposal is devoid of any discussion or evidence demonstrating how less than a 1 percent reduction in domestic methane emissions will have any impact on climate change. The APA demands far more than regulation via the precautionary principle. *See e.g., Washington Environmental Council v. Bellon*, 732 F.3d 1131, 1145 (9th Cir. 2013) (striking down Plaintiff's arguments that "any and all contribution of greenhouse gases must be curbed," and noting the common-sense notion that, as articulated in *Massachusetts v. EPA*, regulatory action should focus on reducing "meaningful contributions" of GHGs).

On a global scale the purported impact of the rule is infinitely smaller and far from "significant," despite EPA's statements to the contrary. Global methane emissions are nearly 7,000 million metric tons per year, whereas U.S. methane emissions are about 600 million metric tons per year, or about 8.5 percent of global emissions. EPA estimates that the rule will reduce between 170,000 and 180,000 tons of methane in 2020 and 340,000 to 400,000 cumulative tons in 2025. 80 Fed. Reg. at 56,596. Even taking EPA's most ambitious, 400,000 tons, this rule provides a reduction of 0.0057 percent of global methane emissions. Global GHG emissions in 2010 totaled 46 billion metric tons of CO2 equivalents. That means by EPA's most ambitious estimate, the proposed rule will reduce global GHGs by 0.0000092 percent to 0.000022 percent. Remarkably,

somehow, the rule labels the forecast methane emissions reductions "significant" on a global scale. 80 Fed. Reg. 56,608 ("[T]he collective GHG emissions from oil and natural gas production and natural gas processing and transmission sources are significant, whether the comparison is domestic . . . or global."). The rule does not define "significant," but it is hard to imagine anywhere else where a 0.0057 percent reduction of anything would be considered significant, particularly given that climate change is a global phenomenon, generally measured on the basis of country-by-country or even continent-by-continent contribution. By justifying the rule almost solely on climate change benefits and contributions towards mitigating climate change impacts from this single sector, the proposal falls far short of what is demanded under the CAA and APA to support the rule. Simply put, there is no logical or rational connection between the facts on the record and the decision being proposed, despite the lengthy preamble. While the Alliance supports common sense measures to address climate change, on this record, the proposal is not such a common sense approach and does not make even a slightly credible case that the regulation contemplated will have any impact on climate change or is otherwise needed.

Response: See the response to DCN EPA-HQ-OAR-2010-0505-6957, Excerpt 7.

Commenter Name: Don Anderson, Director of Environmental
Commenter Affiliation: MarkWest Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6957
Comment Excerpt Number: 2

Comment: EPA's decision to "directly" regulate methane in this proposed rule is confounding and circular, at best. On one hand the proposal concludes that "in light of the current and projected future methane emissions from the oil and natural gas industry, reducing methane emissions from this source category cannot be treated simply as an incidental benefit to [volatile organic compound] VOC reduction." 80 *Fed. Reg.* at 56,599. Yet, on the other hand the rule concludes that methane reductions are simply an incidental benefit to VOC reduction:

Because VOC control technologies perform the same when used to control methane emissions, the [best system of emission reductions] BSER for methane is the same as *the BSER for VOC. Therefore, we are proposing performance and operational standards to control methane and VOC emissions for certain emission sources across the source category. These proposed methane standards would require no change to the requirements for currently regulated affected facilities.*

80 *Fed. Reg.* at 56,610. It appears EPA wants it both ways-representing to the regulated community that the proposed controls are the same BSER as currently implemented and are merely needed for "consistency," *(see* 80 *Fed. Reg.* at 56,599), while in the same breath, trumpeting the rules as groundbreaking and significant for their additional "methane" impacts. I*d.*

While EPA has proposed to regulate several source categories not regulated under the 2012 New Source Performance Standards ("NSPS") *(i.e.,* pneumatic pumps, oil well completions, fugitive

leaks), the rest of the rule is duplicative regulation of already covered sources. Only this time the rule takes credit for direct methane regulation, whereas in 2012 such methane reductions were labeled "co-benefits" for a lack of quality data. Unlike in 2012, however, this rule is justified almost exclusively on methane benefits and climate change impacts, with only passing reference to VOC and HAP reductions. *See, e.g.,* 80 *Fed. Reg.* at 56,597 ("The EPA was unable to monetize all of the benefits anticipated to result from this proposal. The only benefits monetized for this rule are methane related climate benefits." (emphasis added)). Accordingly, this commenter questions whether the rule truly is grounded in sound science regarding single-sector methane contributions to global climate change, or merely advanced in furtherance of EPA's ongoing efforts to appease public critics with respect to climate change regulation.

Response: Regarding the assertion that VOC standards are sufficient to control methane, please see the response to DCN EPA-HQ-OAR-2010-0505-6927, Excerpt 6 which includes reference to the preamble section IV.D (Establishing GHG Standards in the Form of Limitations on Methane Emissions).

Commenter Name: Don Anderson, Director of Environmental
Commenter Affiliation: MarkWest Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6957
Comment Excerpt Number: 3

Comment: This rule appears to be driven by executive fiat rather than scientifically-based facts demonstrating a need to protect public health and the environment. This is at odds bedrock principles of federal administrative law. The preamble goes on at some length trying to defend EPA's asserted legal authority and policy rationale for the rule, but when boiled down to its essence, the rule is merely an attempted execution of executive policy decisions under the guise of the Clean Air Act ("CAA"), and based on slim to nonexistent scientific evidence that it will provide any public health or environmental benefits. For example, the preamble contains a section "Events Leading to Today's Action," where EPA cites the 2009 Greenhouse Gas ("GHG") Endangerment Finding, President Obama's Climate Action Plan, the follow-up Climate Action Plan: Strategy to Reduce Methane Emissions, and the Administration's percent new goal to reduce methane emissions from the oil and gas sector by 40-45 by 2025-all executive actions "leading to the rule." This commenter objects to this improper sole reliance by the executive branch on its own policy directives, as opposed to statutory authority, to promulgate such sweeping regulations.

Response: The EPA does not agree with the commenter's characterization of the EPA's action. While it is true that the agency mentions executive actions including the Climate Action Plan, these executive actions do not provide the legal authority for EPA's action. For an explanation of the EPA's legal authority for this action, including the statutory authority for this action, please see sections III.A (Statutory Background) and III.B (Regulatory Background) of the preamble to this final rule. Additional explanation of the EPA's authority for this final rule can be found in Sections IV.A and IV.D of the preamble to the final rule. For an explanation of the benefits of the final standards, please see section IX.E of the preamble to the final rule.

Commenter Name: Don Anderson, Director of Environmental
Commenter Affiliation: MarkWest Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6957
Comment Excerpt Number: 7

Comment: The Proposed Regulations Will Have Virtually No Impact in Terms of Addressing Climate Change

Even if correct, EPA's estimated emissions reductions, which are based on an illusory 25% growth rate and other incorrect or inaccurate assumptions/methodologies, represent a tiny fraction of all U.S. GHG emissions, and a virtually nonexistent fraction of global GHG emissions. Yet, the rule is justified largely on the basis of avoiding climate change impacts. *See* 80 *Fed. Reg.* at 56,605 ("[R]educing emissions of GHGs across the globe is necessary in order to avoid the worst impacts of climate change, and underscore the urgency of reducing emissions now."). Although the rule strongly implies that total domestic contribution of GHGs from this sector is causing adverse climate change impacts, *see* 80 *Fed. Reg.* at 56,607 (comparing oil and gas GHG emissions with total U.S. GHG emissions "as an indication of the role this sources plays in total domestic contribution to the air pollution that is causing climate change"), the empirical evidence on this record contradicts these assertions. The proposal is entirely devoid of any discussion or evidence demonstrating how less than a 1% reduction in domestic methane emissions (even if true) will have any impact whatsoever on global climate change. The Administrative Procedure Act ("APA") demands far more than this. *See, e.g., Washington Environmental Council v. Bellon,* 732 F.3d 1131, 1145 (9th Cir. 2013) (striking down Plaintiff's arguments that "any and all contribution of greenhouse gases must be curbed," and noting the common-sense notion that, as articulated in *Massachusetts v. EPA,* regulatory action should focus on reducing "meaningful contributions" of GHGs).

On a global scale, the purported impact of the rule is infinitely smaller than advertised, and far from "significant," despite EPA's statements to the contrary. Global methane emissions are nearly 7,000 million metric tons per year, whereas U.S. methane emissions are about 600 million metric tons per year, or about 8.5% of global emissions. EPA estimates that the rule will reduce between 170,000 and 180,000 tons of methane in 2020 and 340,000 to 400,000 cumulative tons in 2025. 80 *Fed. Reg.* at 56,596. Even taking EPA's most ambitious estimate of 400,000 tons, this rule provides a reduction of just 0.0057% of global methane emissions. Global GHG emissions in 2010 totaled 46 billion metric tons of CO2 equivalents, which means the proposed rule will reduce global GHG by 0.0000092% to 0.000022%. Yet, somehow, the rule labels the forecast methane emissions reductions "significant" on a global scale. 80 *Fed. Reg.* 56,608 ("[T]he collective GHG emissions from oil and natural gas production and natural gas processing and transmission sources are significant, whether the comparison is domestic ... or global."). The rule does not define "significant," but it is hard to imagine any circumstance in which a 0.0057% reduction could be considered significant, particularly given that climate change is a global phenomenon, generally measured on the basis of country-by-country or even continent-by-continent contributions. Simply put, there is no logical or rational connection between the facts of record and the decision being proposed, despite the lengthy preamble.

Response: The commenter claims that the proposed rule will have no impact on global climate change, and is insignificant. This assertion is incorrect. The rule is substantial in terms of absolute tons, in terms of relative contribution, and in terms of monetary impacts.

First, this actions reduces a substantial quantity in terms of the absolute number of tons (see Chapter 1.4 of the RIA).

Second, the commenter apparently did not realize that some emission values are reported in CO2 equivalents, which require a factor of 25 to convert to metric tons in order to compare to the reductions reported for the rule. For example, US methane emissions are about 600 million metric tons of CO2 equivalents, which is 24 million metric tons of CH4. Meanwhile, global anthropogenic emissions of methane are about 350 million metric tons (according to the IPCC). Therefore, the commenter underestimated the impact of the rule in terms of percent comparisons to national or global emissions by a factor of 25.

The commenter claims that because climate change is a global phenomenon that this rule is not significant, but it is precisely because climate change is a global phenomenon that small percentage changes are so relevant. There are hundreds of countries, and thousands of sources, so no individual country or source will be a substantial fraction of the whole. Therefore, reducing the rate of climate change is not a matter of reducing a few large sources, but rather of addressing a large number of smaller sources. Therefore, reductions of a fraction of a percent can be substantial and important when solving a global problem.

Third, there are substantial estimated monetized benefits (see Chapter 1.4 of the RIA). In addition to the benefits that have been monetized, there are also additional benefits that have not been monetized due to co-emissions of HAPs, ozone, and particulate matter, as well as the ozone produced from methane oxidation in the atmosphere. The reason that benefits these large can come from reductions that are a fraction of a percent of global emissions is because climate change is a global, long-lived problem: the impacts of climate change are felt everywhere around the globe and will last for decades or centuries. The benefits of emissions reductions are felt everywhere, for many years, and therefore the absolute aggregate of benefits becomes large even when the change in emissions, temperature change, or sea level rise is a small fraction of the total expected.

The EPA has considered the information provided by the commenter and finds that it does not provide credible evidence of flaws in the EPA's conclusions regarding the significance of these reductions.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 187

Comment: The Proposed Significant Contribution Finding For Methane Emissions From The Oil And Natural Gas Sector Is Unlawful Because EPA Failed To Define What Constitutes "Significant" Contribution. As an alternative to its "rational basis" test, EPA proposes to find that methane emissions from the oil and natural gas sector contribute significantly to endangering GHG emissions. 80 Fed. Reg. 56593, 56601. This alternative finding is unlawful because EPA provides no legal basis or analysis as to what constitutes a "significant contribution." In fact, EPA's recent actions suggest that EPA has no standard for making a "significant contribution" finding. When EPA proposed standards of performance for GHG emissions from new electric generating units ("EGUs"), the Agency stated in the preamble that: [I]f the EPA were required to make a cause-or-contribute-significantly finding for CO2 emissions from the fossil fuel-fired EGUs, as a prerequisite to regulating such emissions under CAA section 111, the same facts that support our rational basis determination would support such a finding. In particular, as API Comments on EPA's NSPS for the Oil and Natural Gas Sector December 4, 2015 noted, fossil fuel-fired EGUs emit almost one-third of all U.S. GHG emissions, and constitute by far the largest single stationary source category of GHG emissions; and the CO2 emissions from even a single new coal-fired power plant may amount to millions of tons each year. 79 Fed. Reg. 1430, 1456 (Jan. 8, 2014). EPA noted that "at present, it is not necessary for the EPA to decide whether it must identify a specific threshold for the amount of emissions from a source category that constitutes a significant contribution" because "[u]nder any reasonable threshold or definition, the emissions from EGUs are a significant contribution." Id. Thus, in the proposed NSPS for EGUs, EPA recognized that a specific reasonable threshold for "significant contribution" may be necessary, but the agency determined that one-third of all U.S. GHG emissions would be significant "[u]nder any reasonable threshold." Id. Regardless of EPA's position in the proposed NSPS for EGUs, it is plainly unreasonable for EPA to make the same assumption here. In the proposed rule, EPA concludes that GHG emissions from oil and natural gas processing and transmission sources constitute 3 percent of total GHG emissions in the United States and 0.3 percent of global GHG emissions. 80 Fed. Reg. 56593, 56608. Yet, EPA does not provide any analysis for why three percent of emissions may be significant, identify at what level GHG emissions are significant, or explain why it believes it is unnecessary for it to identify a threshold for significance. The Agency simply declares these emissions to be significant. This is arbitrary and capricious.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6957, Excerpt 7 for the substantial contribution of the rule to GHG mitigation. Please also see section IV.C of the preamble to this final rule.

Commenter Name: Kathleen M. Sgamma, Vice President, Government and Public Affairs
Commenter Affiliation: Western Energy Alliance
Document Control Number: EPA-HQ-OAR-2010-0505-6930
Comment Excerpt Number: 4

Comment: EPA has exceeded its statutory authority under § 307 of the CAA by effectively promulgating an entirely new rule in the context of "amendments" to the new source performance standards (NSPS) in 40 C.F.R. 60, Subpart OOOO (77 Fed. Reg. 49,490 (August

16, 2012)) (NSPS OOOO or 2012 NSPS) and as part of the reconsideration process that has dragged on for over three years now. Section 307 grants EPA the authority to administratively reconsider objections raised to a rule if the person raising the objection "can demonstrate to the Administrator that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule." 42 U.S.C. § 7606(d)(7)(B).

Upon the petition of several stakeholders, including the Alliance, EPA granted reconsideration and issued two reconsidered rules. *See* 78 Fed. Reg. 58,416 (Sep. 23, 2013); 79 Fed. Reg. 79,018 (Dec. 31, 2014). The spirit and intent of these reconsiderations—as it should be—was to fix technical components of the rule. While important to the functionality of the rule, these technical fixes were relatively minor in the overall context of the threshold legal and policy issues raised by the Alliance. *See e.g.*, the Alliance's Petition for Administrative Reconsideration attached hereto as Exhibit "A" (raising fundamental concerns about the rule under the CAA and the Administrative Procedure Act (APA), including whether EPA could ever make the case, legally or within APA governing principles, that methane regulation for this sector was warranted). When the Alliance filed its reconsideration petition and subsequently agreed to a stay of judicial review, we never thought that out of the reconsideration process would emerge an entirely new and different rule directly regulating methane and targeting sources outside the scope of NSPS OOOO.

EPA's use of the reconsideration process to graft a new and separate rule onto NSPS OOOO has denied the Alliance and other stakeholders their right to timely judicial review and is an abuse of the authority granted by Congress to EPA under § 307(d)(7)(B) of the CAA. Although there is a dearth of case law construing the scope of EPA's authority under § 307(d)(7)(B), the plain language of the statute makes clear that EPA's reconsideration authority is not without limitation. Read in context, § 307(d)(7)(B) exists to provide stakeholders and EPA with the ability to fix or tweak rules without going to court—where doing so was not practicable during the course of the APA notice and comment period. This limited delegation is evidenced not only by the language quoted above, but also by the fact that the statute grants the ability to stay the effectiveness of a rule during reconsideration for only three months. *Id.* Congress did not intend § 307(d)(7)(B) to act as an administrative exhaustion requirement; nor does it delegate to EPA the authority to hold a rule in reconsideration for over three years and promulgate an entirely new and separate rule from that being reconsidered (meanwhile precluding judicial review on threshold issues). EPA's actions have been *ultra vires* in this respect. EPA should conclude the reconsideration over NSPS OOOO, let any litigation proceed, and separately promulgate any new "methane" rules on their own administrative record.

[Exhibit A is "Petition for Administrative Reconsideration of the Final Rule for Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 77 Fed. Reg. 49,490 (Aug. 16, 2012)" submitted by Davis Graham & Stubbs LLP on behalf of the Western Energy Alliance and dated October 15, 2012.]

Response: The EPA disagrees with the comment that this action exceeds the EPA's authority under CAA section 307(d)(7)(B). As explained in both the proposal preamble and today's action,

the EPA received numerous petitions for administrative reconsideration of the 2012 NSPS and subsequent amendments. Among the issues raised was one urging that the "EPA must reconsider its failure to adopt standards for the methane pollution released by the oil and gas sector."[1] As the commenter noted, section 307(d)(7)(B) grants EPA the authority to administratively reconsider objections raised to a rule if the grounds for such objection arose after the period for public comment. In the 2012 final rule, in reponse to a comment that the EPA must regulate GHG in addition to VOC for this source category, the EPA noted the incoming data to be received by the EPA through the Greenhouse Gas Reporting Program (GHGRP) and expressed its intention to use that data to evaluate whether to set GHG standards (in the form of limtiations on methane). 77 FR at 4953. The EPA has since received data through GHGRP as well as other information that emerged since the 2012 rulemaking. This issue therefore qualifies for reconsideration of the 2012 rule under section 307(d). Upon reconsideration of this issue, the EPA agrees with the petitioner that the NSPS should include standards for both GHG and VOC and has amended the NSPS accordingly through this action. For the reasons stated above, the EPA's action is well within the authroity provided the EPA by CAA section 307(d)(7)(B).

The commenter has sought juidicial review of the 2012 NSPS and subsequent amendments, all of which have been stayed by the U.S. Court of Appeals. It is worth noting that, in seeking to stay the litigations, the EPA explained to the Court the ongoing administrative reconsideration proceeding and specifically mentioned its intended action regarding addressing GHG from the oil and natural gas industry. The EPA recently filed a motion to extend the stay through August 19, 2016. The motion was unopposed.

Commenter Name: Kari Cutting
Commenter Affiliation: North Dakota Petroleum Council (NDPC)
Document Control Number: EPA-HQ-OAR-2010-0505-6789
Comment Excerpt Number: 10

Comment: NDPC is particularly concerned with EPA's overreach in proposing to regulate methane emissions from oil and natural gas sources in light of states' extensive regulation of both oil and natural gas sources generally and air emissions from these sources specifically. In North Dakota, the NDIC manages state and fee minerals. As described above in section V(B)(1), NDIC regulations include the requirement to flare all casinghead gas. NDIC has also adopted innovative and stringent flaring restrictions in North Dakota pursuant to a July 2014 Flaring Order that implements production restrictions in order to meet the statewide goal of reducing flaring and capturing 90 percent of gas produced in the state by 2020. In addition, the North Dakota Department of Health ("NDDoH") has developed some of the nation's most stringent regulations for oil and gas development. NDDoH regulations and guidance implement

[1] Sierra Club et al., Petition for Reconsideration, *In the Matter of: Final Rule Published at 77 FR 49490 (Aug. 16, 2012), titled "Oil and Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews; Final Rule,"* Docket No. EPA-HQ-OAR-2010-0505, RIN 2060-AP76 (2012).

comprehensive requirements mandating registration and control of air emissions from oil and natural gas sources in the state.

The North Dakota regulatory landscape demonstrates that the state is best suited to address air quality and general regulation of oil and gas operations individually. The Bakken has unique circumstances and challenges posed by the rural nature of the region, the extreme winter weather, and the overall unavailability of gathering line capacity and other oil and gas production infrastructure. North Dakota agencies are well-positioned to understand the effect of these unique characteristics and work to develop effective restrictions on air emissions that at the same time adequately respond to operational challenges. NDIC and NDDoH were able to take innovative steps to address air emissions and flaring from oil and natural gas sources years before EPA began to regulate these sources. The result of these actions is that, as described above in section V(B)(1), there are not air emissions that go uncontrolled in North Dakota that would be addressed by Proposed NSPS OOOOa.

When considering these and other existing state requirements, NDPC believes that the rule is arbitrary and capricious because EPA has not substantiated the existence of a problem the rule is meant to address or identified a gap in existing regulations that the rule will fill. The federal district court for the District of Wyoming recently stayed the effectiveness of the BLM's hydraulic fracturing regulations in part due to this reason. The court found that "BLM has neither substantiated the existence of a problem this rule is meant to address, identified a gap in existing regulations the final rule will fill, nor described how the final rule will achieve its stated objectives. Rather, the Fracking Rule seems a remedy in search of harm." Moreover, the court stated that BLM's rule is "likely arbitrary" because BLM did not discuss or identify "how any existing state regulations are inadequate"; "any states that do not have regulations adequate to achieve the objectives of the Fracking Rule"; or "evidence that its rule will be any more effective in practice than existing state regulations. "

Proposed NSPS OOOOa is likewise arbitrary because EPA has failed to consider existing state requirements that address the same emissions as the Proposed NSPS OOOOa. As described above, EPA did not take into account North Dakota combustion requirements and instead assumes that air emissions during completion are entirely uncontrolled. If EPA considered state requirements for flaring during completion, such as those in North Dakota, the Proposed NSPS OOOOa would be rendered unnecessary. Proposed NSPS OOOOa is therefore arbitrary and capricious.

Response: The EPA evaluated existing state and local programs when developing these federal standards and attempted, where practicable, to limit potential conflicts with existing state and local requirements. The federal standards finalized in this rulemaking action apply across the entire country. As such, the Agency considered a wide array of information when developing these standards. Moreover, this final rule does not prohibit states from regulating. For additional information on the EPA's interactions with states, please see section III of the preamble to this final rule, specifically the subsections titled "Outreach to state, local, and tribal governments" and "Related State and Federal Regulatory Actions." For information on the problems that this rule is designed to address, please see sections IV.B, IV.C, IX.A and IX.E of the preamble to the final rule.

Commenter Name: J. Roger Kelley
Commenter Affiliation: Domestic Energy Producer's Alliance (DEPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6793
Comment Excerpt Number: 9

Comment: DEPA is particularly concerned with EPA's overreach in proposing to regulate methane emissions from oil and natural gas sources in light of the states' extensive regulation of both oil and natural gas sources generally and air emissions from these sources specifically. The oil and gas regulatory bodies in the oil producing states manage state and fee minerals. Their authority includes the flaring of casing-head gas. The various state environmental regulatory bodies implement regulations and guidance mandating registration and control of air emissions from oil and natural gas sources in the state. The result of these actions is that there generally are not air emissions that go uncontrolled in any of the DEPA member states that would be addressed by Proposed NSPS OOOOa.

When considering these and other existing state requirements, DEPA believes that the rule is arbitrary and capricious because EPA has not substantiated the existence of a problem the rule is meant to address or identified a gap in existing regulations that the rule will fill. The federal district court for the District of Wyoming recently stayed the effectiveness of the U.S. Bureau of Land Management's ("BLM") hydraulic fracturing regulations in part due to this reason. The court found that "BLM has neither substantiated the existence of a problem this rule is meant to address, identified a gap in existing regulations the final rule will fill, nor described how the final rule will achieve its stated objectives. Rather, the Fracking Rule seems a remedy in search of harm." Moreover, the court stated that BLM's rule is "likely arbitrary" because BLM did not discuss or identify "how any existing state regulations are inadequate"; "any states that do not have regulations adequate to achieve the objectives of the Fracking Rule"; or "evidence that its rule will be any more effective in practice than existing state regulations."

Proposed NSPS OOOOa is likewise arbitrary because EPA has failed to consider existing state requirements that address the same emissions as the proposed rule. The EPA did not take into account state combustion requirements and instead assumes that emissions during completion are entirely uncontrolled. If EPA considered state requirements for flaring during completion, the rule would be rendered unnecessary. Proposed NSPS OOOOa is therefore arbitrary and capricious.

Response: See response to DCN EPA-HQ-OAR-2010-0505-6789, Excerpt 10.

Commenter Name: Alvyn A. Schopp, Chief Administration Officer and Regional Vice President and Treasurer
Commenter Affiliation: Antero Resources Corporation
Document Control Number: EPA-HQ-OAR-2010-0505-6935
Comment Excerpt Number: 5

Comment: The New Source Performance Standard for New and Modified Natural Gas Sources Should Not Target Methane Emissions

Antero welcomes the opportunity to provide input with regard to USEPA's proposed New Source Performance Standards (NSPS) targeting methane emissions from the exploration and production segment of the oil and natural gas sector. Antero notes that USEPA states that it "believe[s] it is important to regulate methane from the oil and gas sources already regulated for VOC [volatile organic compound] emissions to provide more consistency across the category . . ." Significantly, the principle focus of the proposal is reduction of methane emissions. See, Proposed 40 CFR § 60.5360a. However, while reduction of methane emissions may be an USEPA goal for other purposes, promulgation of the proposed NSPS is beyond the scope of USEPA's authority inasmuch as the definition of VOC excludes methane so an NSPS focusing on methane to achieve attainment with an ozone NAAQS is unenforceable. 40 CFR § 51.100 (s) defines VOC as:

> "any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. (1) This includes any such organic compound other than the following, which have been determined to have negligible photochemical reactivity: methane; ethane; methylene chloride (dichloromethane)..." [emphasis supplied]

Because the VOC definition above specifically excludes methane, regulating methane as a VOC exceeds the scope of USEPA authority under the CAA. An NSPS provides standards for reduction of a regulated pollutant but USEPA fails to acknowledge that, in this instance, the only applicable NAAQS is the ozone NAAQS, attainment of which is dependent on reductions of ozone precursors VOCs and NO_x. Quite simply, as a matter of law, methane is neither a VOC nor NO_x, and thus the basis for this proposed NSPS is flawed and should be withdrawn.

Response: The EPA has considered this comment. Given that the EPA is not regulating methane as a VOC in this rule, the commenter's argument does not apply to this regulation. With respect to the GHG standards contained in the final rule, the EPA identifies the air pollutant as the pollutant GHGs. However, the standards in the rule that are specific to GHGs are expressed in the form of limits on emissions of methane.

Commenter Name: Peter Zalzal, Hillary Hull, Elizabeth Paranhos and Alice Henderson
Commenter Affiliation: Environmental Defense Fund
Document Control Number: EPA-HQ-OAR-2010-0505-7033
Comment Excerpt Number: 2

Comment: Methane is a Harmful, Potent Climate Forcer

As we note in the -- our joint comments, EPA is not required to make a pollutant-specific endangerment finding and ample evidence supports the EPA's rational basis for regulating

methane emissions. Indeed, in the preamble to proposed subpart OOOOa, EPA provides a compelling summary of the present and projected impacts of climate change in the United States. Further, EPA has provided a detailed and rigorous analysis of the oil and natural gas sector's significant contribution to these harmful emissions.

We strongly support EPA's assessment of the scientific literature, EPA's characterization of the many impacts associated with climate change, and EPA's analysis of GHG emissions from the oil and natural gas sector. Below, we provide additional information further supporting the significant harms associated with greenhouse gases, including methane emissions from the oil and natural gas sector.

We strongly support EPA's summary of the key elements of the 2009 Endangerment Finding, as well as the Agency's evaluation of more recent scientific assessments issued by the National Research Council, IPCC, and U.S. Global Change Research Program (among others). EPA has clearly articulated how increasing GHG emissions are likely to harm human health and welfare, and the information we provide below only further strengthens and supports the agency's analysis by describing how addressing methane emissions from the oil and natural gas sector would provide additional climate benefits that are complementary to those achieved by regulation of carbon dioxide (CO2).

We have identified several recent studies emphasizing the importance of reducing emissions of both "short-lived climate pollutants (SLCPs)" and CO2 as a means to address near- and long-term climate change impacts. Because methane is a shorter-lived greenhouse gas than CO2, the benefits of reducing methane emissions are realized on short (decadal) time scales. As a result:

[C]uts in emissions of the shorter-lived non-CO2 GHGs, primarily CH4, could cause a rapid decrease in the radiative forcing attributable to these gases. Such a quick response time is not possible from CO2 cuts alone. Reducing the peak climate forcing and minimizing the time during which it is enhanced could lessen the possibility that the climate irreversibly crosses a tipping point into a new state.

Recent scientific literature has identified a number of important and complementary benefits associated with reducing emissions of SLCPs, many of which are driven by methane emission reductions. As discussed below, these benefits include the potential to (1) significantly reduce background levels of global ozone; (2) reduce near-term radiative forcing, delaying the timing of "peak temperature"; and (3) minimizing the pace of change and severity of several important climate impacts.

Reducing Background Levels of Global Ozone In the subpart OOOOa preamble, EPA states that "compared to a future without climate change, climate change is expected to increase ozone pollution over broad areas of the US, especially on the highest ozone days and in the largest metropolitan areas with the worst ozone problems, and therefore increase the risk of mortality and morbidity." We agree with EPA's projection that higher ozone levels will increase mortality and morbidity, and lead to adverse impacts to agriculture and ecosystems as ozone and climate worsen.

The connection between climate change and ozone is an important one, and below, we have provided additional information from several recent studies demonstrating that reducing methane emissions can reduce the risks of both climate change and ozone pollution. These studies have evaluated the potential benefits associated with reduced methane emissions on both human health and the environment.

• Anenberg, et al., for example, states that "controlling methane emissions may be a promising means of simultaneously mitigating climate change and reducing global ozone concentrations, compared with controlling shorter-lived ozone precursors nitrogen oxides (NOx), carbon monoxide (CO), and non-methane volatile organic compounds (NMVOCs)." The paper concludes: "Relative to the 2030 reference scenario, implementing the methane measures would decrease seasonal (6-month) average 1-hr daily maximum ozone concentrations by 3-4 ppb. … [The authors] estimate that these measures could reduce global population-weighted average surface ozone concentrations by 4.71 – 11.0 ppb."

• Sarofim, et. al., makes similar points, stating that "reducing methane pollution will both slow anthropogenic climate change and reduce ozone-related mortality." He further notes that because methane is globally well-mixed in the atmosphere, "the ozone response to methane emissions is mostly insensitive to the location in which the emissions were reduced." Sarofim et al., concludes "the benefits of avoided cardiovascular and pulmonary mortality due to reduced methane emissions are substantial and are an important benefit to include when assessing the benefits of methane mitigation policies."

• West, et. al., stresses that methane "affects global baseline (i.e., not affected by local sources) concentrations of ozone. In fact, methane is the dominant anthropogenic volatile organic compound (VOC) contributing to ozone formation in the global troposphere. Anthropogenic increases in emissions of methane and nitrogen oxides have been identified as the most important causes of the historic increases in background ozone concentrations since pre-industrial times." Further, West notes that "reduced ozone concentrations would also provide benefits in … agricultural productivity, ecosystems and the global carbon cycle, and materials." Similarly, Victor, et al., states that emissions of short-lived climate pollutants [methane, black carbon, and ozone] currently "degrade more than a hundred million tons of crops."

These articles and others provide additional evidence on the harms associated with methane emissions and the benefit of reducing these emissions —both mitigating climate change and reducing global background ozone concentrations.

Reducing "Peak Warming"

A second important and complementary benefit of reducing methane emissions is the potential to reduce near-term climate warming and associated impacts. Many studies have highlighted the key role that minimizing methane emission can play in reducing "peak warming." For example, Shindell, et. al., states that "the combination of CH4 and BC measures, along with substantial CO2 emission reductions … has a high probability of limiting global mean warming to <2C during the next 60 years." The study further notes "the CH4 measures contribute more than half of the estimated warming mitigation and have the smallest relative uncertainty." Similarly, a

study by the United Nations Environment Program (UNEP) concludes "it is possible to slow down the pace of global warming very quickly … by reducing concentrations of 'short-lived climate forcers' in the atmosphere."

The benefits of reducing emissions of both short-lived climate pollutants like methane, and longer-lived CO2, are significant. As Montzka, et al., explains "cuts in emissions of shorter-lived non-CO2 GHGs, primarily methane, could cause a rapid decreases in the radiative forcing attributable to these gases. Such a quick response is not possible from CO2 alone." Victor, et. al., states that "with available technologies, it is possible to cut these SLCPs drastically … This would avoid up to 0.6C of warming by mid-century, while also slowing rising sea levels, the melting of glaciers, and the retreat of the Arctic ice cap." Similarly, Hu et al., highlights recent studies that "have estimated that the mid-century warming could be reduced by about 0.6C, leading to a delayed onset of the 2C warming by several decades." This study also emphasizes that "in the near-term, SLCP mitigation is more effective than CO2." Finally, UNEP concludes "recent scientific results, including an assessment sponsored by UNEP and WMO, show that it is possible to slow down the pace of global warming very quickly (relative to a reference scenario) by reducing concentrations of 'short-lived climate forcers' in the atmosphere. These are substances that contribute to global warming and also have relatively short lifetimes in the atmosphere. They include methane, black carbon particles, tropospheric ozone, and many hydrofluorocarbons."

Reducing Methane Emissions in the Near-Term Slows the Rate of Many Climate Impacts

As described above, methane emission reductions can play an important role in slowing the pace of change for many climate impacts. UNEP, for example, states "impacts of climate change are already observed and increasing, as in the case of diminishing Arctic summer ice or the shifting ranges of various plants and animals. Slowing down near-term climate change will dampen the quickening pace of impacts and help avoid risk of irreversible changes." And UNEP explains "reducing near-term climate change will also allow more time for ecosystems to adapt to the changing climate and for societies to plan and implement adaptation measures. In general, the slower tempo of climate change, the easier it will be to adapt."

Reducing methane emissions can also help slow the rate of sea level rise. In the preamble to the proposed rule, EPA notes that "the USGCRP [3rd National Climate Assessment] and multiple NRC assessments have projected future rates of sea level rise that are 40% larger to more than twice as large as the previous assessments from the 2007 IPCC Fourth Assessment Report." In fact, a 2013 study by Hu, A., et al., found that "methane mitigation has the largest effect in mitigating sea level rise, with CO2 next … Overall, the mitigation of CO2 and short-lived climate pollutants could not only keep the global warming under check, but can also reduce the projected sea level rise by 31 – 50%, and reduce the projected sea level rise rate by 50 – 66% by 2100." Hu, et al. concludes that delaying emission reductions from short-lived climate pollutants "could reduce the impact of the CO2 and short-lived climate pollutant mitigation by about 30%."

As EPA stated in the preamble to the proposed rule, "significant reductions in emissions would lead to noticeably less future warming beyond mid-century, and therefore less impact to public health and welfare." We agree with EPA's conclusion, and the information we present here only

further underscores substantial harms associated with methane emissions and the significant climate and public health benefits associated with reducing methane.

Response: The EPA recognizes the commenter's support of the proposed regulation, and agrees that reductions of methane emissions will have benefits in terms of reduced temperature change, sea level rise, and ozone concentrations. The EPA also acknowledges that reducing methane emissions is likely to result in near-term benefits. The EPA has considered the information provided by the commenter and finds that it is generally consistent with the conclusions of the assessment literature as summarized in the preamble.

Commenter Name: Jeff Zimmerman
Commenter Affiliation: Zimmerman & Associates (Damascus Citizens for Sustainability, NYH2O and Citizens for Water)
Document Control Number: EPA-HQ-OAR-2010-0505-7000
Comment Excerpt Number: 1

Comment: We are submitting the following comments on behalf of Damascus Citizens for Sustainability, NYH2O and Citizens for Water. While we support the proposed NSPS to limit emissions of methane and VOCs from the oil and gas sector, we are submitting the attached letter by Dr. Bryce Payne, Dr. Brian Redmond and Dr. Dennis Lemly to the President, Secretary of State, and Special Envoy to COP 21 on Climate Change. In this letter demonstrates that use of a 100 year period for deriving the global warming potential of CO2, methane and other climate change pollutants grossly underestimates the climate changing impacts of anthropogenic methane sources. Methane is far more reactive in the atmosphere than CO2 such that a pulse of methane in year 1 is completely consumed by year 10. Use of a 100 year integration period for methane significantly underestimates the climate change impact of methane emissions. This letter should be added to the analysis of climate change impacts of methane in support of the proposed regulations. We will be happy to facilitate connection of Drs. Payne, Redmond and Lemly with EPA staff responsible for development of the proposed regulations.

[The commenter attached a letter from Bryce F. Payne Jr., PhD, Brian Redmond, PhD, and Dennis Lemly, PhD to The President of the United States, Secretary of State, Special Envoy to COP21 of the UNFCCC. The letter indicates that current UNFCCC conventions are based on flawed application of scientific information, which results in misleading estimates of effective levels of greenhouse gas emissions. The letter describes the flaws and resulting errors by examining data presented primarily by the Fifth Assessment Report (2013) of the International Panel on Climate Change.]

Response: The EPA recognizes the support of the commenter for the proposed regulations. However, various commenters also assert that the EPA should use a 10 year or 20 year GWP for accounting for the effect of methane on the climate. While the EPA acknowledges that reducing methane emissions is likely to result in near-term benefits, we disagree that switching to the 10 year or 20 year GWP from the 100 year GWP would yield improved estimates of climate impacts.

The commenters quote the IPCC assessment as stating that "[t]here is no scientific argument for selecting 100 years compared with other choices." Fuglestvedt et al., 2003; Shine, 2009. "The choice of time horizon is a value judgement because it depends on the relative weight assigned to effects at different times." Id. The EPA agrees that a value judgment is inherent in choosing a timescale, but the EPA disagrees with the commenters that 10 or 20 years would be better than 100 years. 100 years is close to the timespan of a human lifetime, and is a common timespan for long-term policy analysis. Moreover, it has a long history in international negotiations as a relevant timespan for climate change. As many arguments could be made that 100 years is too short of a timespan (e.g., because the timescales of climate responses such as the melting of the ice sheets can be on the order of centuries) as could be made for use of a shorter timespan.

The commenters incorrectly assert that the timescale of a GWP should be chosen to match the lifetime of the relevant gas. Using a 10 or 20 year GWP for methane and a 100 year GWP for nitrous oxide and then comparing the CO2 equivalent emissions is like calculating the weight of an apple in pounds and comparing the result to the weight of an orange in kilograms. This is because a CO2 equivalent for a 10 year GWP is not equal to a CO2 equivalent for a 100 year GWP: they are two different units.

The use of a 100 year GWP does not amount to "effectively ignoring" any short term climate warming as the commenter claims: all the warming that occurs during the entire 100 year timeframe is included equally in the calculation of the 100 year GWP. Conversely, the 20 year GWP does ignore any climate warming that happens more than 20 years after the date of emissions.

The EPA considers the 100 year GWP to be a measure which does a good job balancing long term and near term impacts when comparing emissions of different gases. However, two other approaches to considering relative impacts are also reasonable to use. The first is the Social Cost of Methane, as used in the proposed rule. Rather than choosing a 100 timeframe, this approach uses a discount rate to value different time periods, and rather than using radiative forcing, the Social Cost approach uses a modeled, monetized estimate of impacts. The second approach is to explicitly calculate changing concentrations of gases and radiative forcing over time.

Taking all these factors into account, the EPA feels that the presentation of methane impacts in terms of both 100 year GWP and in terms of Social Cost of Methane is appropriate and sufficient, and that no presentation of short-term GWP measures is needed.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 2:40 PM; Public Hearing #2 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 37

Comment: Of special importance to me, though, is the methane waste that comes with natural gas wells. Methane is a greenhouse gas that's 85 times worse than CO_2 generated by vehicular traffic in trapping heat in the atmosphere. According to the EPA's Clean Power Plan, the emission of greenhouse gases threatens Americans' health and welfare by leading to long-lasting changes in our climate.

I have no doubts about a warming planet that's being impacted by human contributions from extracting and burning fossil fuels, along with stripping our carbon sinks as we destroy forests to develop land for commercial uses and animal agriculture.

Response: The EPA has considered the commenter's arguments, and agrees that the emission of methane and other greenhouse gases contributes to the threat to Americans' health and welfare by leading to climate change.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 2:40 PM; Public Hearing #2 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 104

Comment: So let's get down to business. We need EPA to regulate methane for a couple of reasons. I just mentioned one, biological and cultural systems across the world are failing because of our negligence to the environment.

Response: The EPA has considered the comment. As the commenter has noted, the EPA is taking this final action to protect the environment, among other reasons.

Commenter Name: Lee Fuller, Executive Vice President, and V. Bruce Thompson, President
Commenter Affiliation: Independent Petroleum Association of America (IPAA) and the American Exploration and Production Council (AXPC)
Document Control Number: EPA-HQ-OAR-2010-0505-6983
Comment Excerpt Number: 48

Comment: In Section V and VI, EPA indicates it is responding to and granting a Petition for Reconsideration associated with the 2012 NSPS Subpart OOOO for VOCs which requested the promulgation of NSPS for methane. The key elements outlined as EPA's reasoning for granting reconsideration are:

- "the wealth of additional information now available to us . . ."
- "[t]he oil and natural gas industry is one of the largest emitters of methane, a GHG with a global warming potential more than 25 times greater than that of carbon dioxide."

- "because the EPA is not listing a new source category in this rule, the EPA is not required to make a new endangerment finding with regard to oil and natural gas source category in order to establish standards of performance for the methane from those sources."
- "a number of major scientific assessments have been released that improve understanding of the climate system and strengthen the case that GHGs endanger public health and welfare for current and future generations."

EPA then dedicates approximately 10 pages of the preamble to defending their position that a separate endangerment finding strictly for methane is not needed (and backfilling in case they are wrong), making the case for global climate change from GHGs, and presenting various charts on U.S. methane emissions. Unlike the remaining sections of the preamble (approximately 55 pages), in which EPA seeks specific comments on particular issues at least 50 different times, EPA did not seek comment once in Sections V and VI.

While IPAA/AXPC has not attempted to take issue with or refute every inaccuracy or assertion contained within these sections of the preamble, EPA's key elements are addressed briefly below:

IPAA/AXPC agrees there is a wealth of additional information – much of it taking issue with anthropogenic global warming. A cursory review of the website Watts Up With That, http://wattsupwiththat.com/, reveals the science is not "settled" as EPA would have one believe.

- While EPA alleges that the oil and natural gas sector is one of the "largest emitters of methane", EPA's own numbers illustrate that in 2013, the oil and natural gas sector accounted for 2.22% of the Total U.S. GHG Inventory. And as stated earlier, the exploration and production segment is only 1.07% of that 2.22%. The oft-quoted greenhouse gas multiplier is subject to manipulation based on the timeframe used to make the carbon dioxide comparison, and the "legacy warming from fugitive methane is minuscule compared to that of carbon dioxide."
- The adequacy of EPA's endangerment finding is far from settled and will certainly be subject to legal challenge upon final promulgation of this rule if EPA persists with its intention to regulate methane directly.
- In supporting its claim that EPA better understands climate change, it cites the Intergovernmental Panel on Climate Change's (IPCC) 2013-2014 Fifth Assessment Report (AR5). Many of these "citations" or statements to support EPA's position are from the Summary for Policy Makers, which was written by the policy makers, not the scientists who authored the report. Judith Curry, former Chair of the School of Earth and Atmospheric Sciences at the Georgia Institute of Technology, evaluated and commented on the AR5, not the Summary for Policy Makers, and noted various factors that evidence a weakening of the case for anthropogenic global warming:
    - Lack of warming since 1998 and growing discrepancies with climate model projections
    - Evidence of decreased climate sensitivity to increases in CO2
    - Evidence that sea level rise from 1920-1950 is of the same magnitude in 1993-2012
    - Increasing Antarctic sea ice extent

- Low confidence in attributing extreme weather events to anthropogenic global warming.

- EPA also relies heavily on the U.S. Global Change Research Program's (USGCRP) 2014 National Climate Assessment, Climate Change Impacts in the United States (NCA3), to support its alleged climate change impacts – ranging from decreased Artic summer sea ice to increased sea levels to drier/more intense storms, as well as greater impact to children and the elderly.
  - Studies not cited by EPA demonstrate no significant changes or deviations from cyclical patterns in the quantity of ice.
  - As to the frequency and intensity of storms, other studies not cited by EPA raise questions regarding storm predictability: "October marks a continuation of a record-long major hurricane (Category 3 or stronger) landfall drought in the United States. The last major hurricane to make landfall in the U.S. was Wilma on October 24, 2005. This major hurricane drought surpassed the length of the eight-years from 1861-1868 when no major hurricane struck the United States' coast. On average, a major hurricane makes landfall in the U.S. about once every three years. The reliable record of landfalling hurricanes in the U.S. dates back to 1851." "The bar charts below indicate there has been little trend in the frequency of the stronger tornadoes over the past 55 years."

The title of Section V of the preamble is "Why is the EPA Proposing to Establish Methane Standards in the Oil and Natural Gas NSPS?" EPA's stated concerns are ostensibly laudable. However, nothing set forth in Section V or Section VI of the preamble justifies or necessitates separate methane NSPS from the exploration and production sector.

Response: The commenter claims that the 2009 Endangerment Finding is inadequate and will be subject to legal challenge, and that climate science is not "settled." These claims are flawed. The 2009 Endangerment Finding has already withstood legal challenge. See *Coalition for Responsible Regulation, Inc., v. EPA*, 684 F.3d 102 (D.C. Cir. 2012). The Supreme Court was petitioned regarding Endangerment but did not disturb the D.C. Circuit's holding on that issue. Regarding the science, the EPA acknowledges that there are many aspects of climate science which continue to be active areas of research. However, there are also many aspects of climate science which are settled: that humans are the root cause of the increasing concentrations of greenhouse gases, that elevated concentrations of greenhouse gases contribute to warming, and that warming has been observed are all well understood. As discussed in the proposal, observations show that the climate has continued to change, and scientific assessments since the 2009 Endangerment Finding improve the understanding of the climate system and strengthen the case that GHGs endanger public health and welfare.

The commenter cites a number of blog posts and websites that discuss climate change, but fails to make a case that climate change does not endanger public health and welfare. The commenter claims that EPA relied on the Summary for Policymakers of the IPCC 5th Assessment Report for new science released since the 2009 Endangerment Finding, rather than on the underlying IPCC assessment chapters, and that the Summary does not accurately reflect those chapters. The EPA does indeed cite the Summary. The Summary is a reliable, peer-reviewed and government-reviewed source of scientific information. However, EPA staff also reviewed the chapters

underlying the Summary, and do not find discrepancies between the chapters and the Summary. The commenter makes a number of assertions regarding observations, but in some cases is incorrect (e.g., Arctic sea ice continues to decline despite the commenter's assertions, as is evident even in the links the commenter provides, and warming continues since 1998 despite the commenter's assertions, with 2015 being the warmest year on record – see section IV.B.1 of the final rule preamble of the NSPS), in other cases is perfectly consistent with the EPA summary of science (e.g., the EPA makes no claims that climate change is causing an increase in tornadoes), and overall makes no coherent argument regarding the EPA's conclusions. EPA has considered the information provided by the commenter and finds that it does not provide credible evidence of flaws in the EPA's approach of relying upon the synthesis conclusions of the major assessments.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:10 AM - 8:00 PM; Public Hearing #1 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 86

Comment: So why do parents like myself care about air pollution from the oil and gas industry? The answer is simple. Industrial pollution from the oil and gas industry harms our children's health, it fuels global warming, and it wastes billions of dollars in natural gas each and every year.

Standards that reduce methane emissions from oil and gas development will simultaneously reduce emissions and formation of health-damaging air pollutants, including volatile organic compounds, hazardous air pollutants, particulate matter, and ozone. Benzene, formaldehyde, and other toxic pollution does not belong in the air our children breathe. Reducing methane would reduce the exposure of nearby communities to hazard pollution and the subsequent risk of health effects including respiratory morbid -- morbidity -- morbidity and premature death.

Response: The EPA agrees that reductions in methane emissions from oil and gas will simultaneously reduce emissions of HAPs and VOCs (a precursor to formation of ozone and PM2.5). As stated in the RIA, we expect that the avoided emissions will result in improvements in ambient air quality and reductions in negative health effects associated with these pollutants. However we have determined that quantification of those benefits cannot be accomplished for this rule. This is not to imply that there are no health benefits anticipated from the proposed rule; rather, it is a reflection of the difficulties in modeling the direct and indirect impacts of the reductions in emissions for this industrial sector with the data currently available.

Commenter Name: N. Cabrera
Commenter Affiliation: Citizen

Document Control Number: EPA-HQ-OAR-2010-0505-5341
Comment Excerpt Number: 1

Comment: I am pleased to submit this comment on the EPA's proposed amendments to the New Source Performance Standards for the oil and natural gas sector. In its 2009 endangerment analysis, the EPA determined that greenhouse gases—like methane—endanger public health and welfare. Indeed, methane accounts for nearly 9 percent of domestic greenhouse gas emissions, a troubling figure in light of the fact that a ton of methane has a global warming effect that is more than 20 (and possibly over 30) times greater than a ton of carbon dioxide. The EPA estimates that methane emissions will increase precipitously by 2030 if action is not taken. It is clear that methane is, and will remain, a lead contributor to global warming unless comprehensive regulation occurs. In coordination with President Obama's Climate Action Plan and Strategy to Reduce Methane Emissions, the EPA is poised to regulate new and modified sources' methane emissions under Section 111(b) of the Clean Air Act.

Industry commentators are quick to point out that methane emissions have decreased by more than 11 percent since 1990 and that, therefore, industry does need regulation in order to continue to stem emissions. This figure should be taken with a grain of salt, due to the widespread miscalculation of methane emissions. A February 2015 study found that the EPA has underestimated EPA emissions by roughly 50%. It seems quite reasonable to believe that industry lobbyists have similarly underestimated methane emissions, and that, relatedly, the industry's reduction of methane emissions is likely to be less than the quoted 11 percent. Industry is not sufficiently incentivized to independently reduce methane emissions. As such, governmental regulation is key.

Response: Comment is a supportive comment to which no response is required.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 2:40 PM; Public Hearing #2 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 81

Comment: Methane, which I will focus on in my comments today, has very serious ramifications for the world's climate. Methane is a powerful climate pollutant, at least 84 times more powerful than carbon dioxide during the first 20 years of its presence in the atmosphere. Because of its potency, reducing methane emissions can reduce the rate of warming substantially in the near term.

EPA estimates that methane comprises nearly 10 percent of the U.S. greenhouse gas emissions. However, some studies have recently concluded you've significantly underestimated the quantity of methane emissions.

A study published last month found emissions from facilities that collect natural gas from well sites called gathering facilities emit eight times as much methane as EPA estimated in its greenhouse gas inventory. These kinds of findings indicate the problem could be corroborated and currently understood.

There are many sources of methane, including agricultural and industrial processes. But the oil and gas sector is one of the larger ones representing nearly 30 percent of all methane emissions. It's also one of the easier sources to address.

However, EPA has noted that methane emissions from the oil and gas sector are projected to rise 25 percent in the next ten years if implements are not proposed, making this an even more crucial area.

Response: The EPA has considered the comment, and agrees that methane contributes to climate change and that reducing emissions can reduce the rate of warming.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 2:40 PM; Public Hearing #2 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 95

EPA's proposed regulations address critical greenhouse gas pollution issues which threaten Americans' health and welfare due to long-lasting changes in our climate that can have a wide range of negative effects on human health and environment. The EPA reports methane is one of such source of emissions.

We know that the EPA's projections are that 20 to 30 percent reduction in methane emissions in this country can be expected by the application of these rules to the oil and gas industry and oil and gas transmission and restructure. This is noteworthy.

Response: The EPA recognizes the commenter's support of the proposed regulations. Reductions in methane emissions from the oil and gas sector is an important part of efforts to address climate change.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 2:40 PM; Public Hearing #2 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 102

Comment: We know that methane plays a significant role in causing climate change. And some of the largest emitters, of course, industrial emitters are the oil and gas industry. So -- and 30 percent of these emissions we know are coming from our Lone Star state, so that is significant. So we certainly -- this action taking place in Texas.

Response: The EPA recognizes the commenter's support of the proposed regulations. Reductions in methane emissions from the oil and gas sector is an important part of efforts to address climate change.

Commenter Name: Jimmy D. Carlile
Commenter Affiliation: Fasken Oil and Ranch, Ltd.
Document Control Number: EPA-HQ-OAR-2010-0505-6851
Comment Excerpt Number: 7

Comment: Fasken believes that the EPA should look to other methane sources. As noted above, emissions from the exploration and production industry represent 1.07% of the overall GHG inventory. Also as noted, emissions were reduced 20% between 2012 and 2014 despite an exponential increase in production of hydrocarbons. In this regard, the EPA should look to reduce methane emissions from the other industries that represent 98.93% of the GHG inventory.

Response: The EPA is working on reducing methane and other greenhouse gases from a number of sources and entities, not just the oil and gas industry. See for example the Light and Heavy-Duty Vehicle Greenhouse Gas Emissions, the Corporate Average Fuel Economy Standards, and the Clean Power Plan for Existing Power Plants.

Commenter Name: Theresa Pugh
Commenter Affiliation: Interstate Natural Gas Association of America (INGAA)
Document Control Number: EPA-HQ-OAR-2010-0505-6872
Comment Excerpt Number: 29

Comment: Subpart W Emissions Information Should Be Considered When Determining Environmental Benefits and the Need for Regulation.

Since 2011, operators have been reporting emissions information to EPA under the GHGRP. This includes thousands of new measurements at T&S compressor stations associated with Subpart W annual surveys. When the GHGRP was adopted, a primary EPA objective was to use that information to inform future policy. In 2015, as GHG programs migrate from emission reporting to emissions reductions, the GHGRP data has not been used for its stated purpose. There is little indication that EPA has considered four years of Subpart W reporting, including many measurements, to inform this rulemaking.

Industry stakeholders are engaged in a review process and initial results raise questions about the Proposed Rule. It appears that Subpart W data provides some compelling data, including these examples:

1. Emissions measurement data supports DI&M by reinforcing the understanding that a small minority of leaks are responsible for the majority of compressor station leak emissions;

2. Emissions measurement data indicates that emissions from centrifugal turbines with wet seal degassing vents are many times lower that EPA's current estimates; and

3. Pneumatic controller counts and emissions estimates indicate that pneumatic device emissions are lower for T&S than current EPA estimates, and a relatively minor contributor to T&S methane emissions.

The first item provides support for focusing on gross emitters by allowing DI&M. The other two items raise questions about environmental benefit estimates and whether regulation of those sources is warranted.

INGAA recommends that EPA engage in a more thorough and thoughtful process that considers Subpart W data, including T&S measurement data. INGAA welcomes additional discussion on this topic and related stakeholder projects that are reviewing and analyzing Subpart W data.

Response: The EPA reviewed all available relevant data on oil and gas methane emissions in the process of development of this rule, including data reported to Subpart W. Recently, EPA updated its GHG Inventory, using data from Subpart W in several areas. In several places, these updates were also implemented in the final NSPS. For example, data from Subpart W were used to update equipment counts at well sites. For pneumatic controllers in transmission and storage, emission factors from subpart W were used in the proposal, and are used in the final. For additional information on GHGRP compressor data, please see response to DCN EPA-HQ-OAR-2010-0505-6872, Excerpt 38 (Chapter 7.1 Centrifugal Compressors – Support for Proposed Standard).

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider
Commenter Affiliation: Clean Air Task Force et al.
Document Control Number: EPA-HQ-OAR-2010-0505-7062
Comment Excerpt Number: 18

Comment: EPA's authority to adopt new source standards for methane from the oil and gas industry is clear regardless of the methane co-benefits already expected from certain upstream sources under the 2012 VOC rule. Nothing in the text, history, or structure of section 111(b) prohibits the agency from requiring sources to control their emissions of a dangerous pollutant simply because the sources must already control *different* pollutants using the same or similar methods. Rather, section 111 compels EPA to adopt performance standards even when other legal requirements address part of the same pollution problem as a practical matter. As EPA

rightly notes, [w]hile the VOC standards in the 2012 NSPS also reduce methane emissions, in light of the current and projected future methane emissions from the oil and natural gas industry, reducing methane emissions from this source category cannot be treated simply as an incidental benefit to VOC reduction; rather, it is something that should be directly addressed through standards for methane under section 111(b) based on direct evaluation of the extent and impact of methane emissions from this source category and the best system for their reduction.

Id. D.C. Circuit case law affirms that EPA must regulate a source's emissions of a particular pollutant even where the source already controls those emissions as a result of complying with other legal obligations. For instance, in *State of N.Y. v. Reilly*, 969 F.2d 1147, 1153 (D.C. Cir. 1992), the court rejected EPA's argument that it need not ban the burning of lead-acid vehicle batteries under the NSPS for municipal waste combustors because "the Resource Conservation and Recovery Act includes strict provisions against the burning of lead-acid batteries." The court responded that "the mere existence of other statutory authority which might undergird EPA's final stance is insufficient to justify the omission of the battery ban." *Id.* Similarly, in *Portland Cement Ass'n v. EPA*, 665 F.3d 177, 191 (D.C. Cir. 2011), the court rejected legal challenges to an NSPS limit for PM that tracked a concurrently-issued PM standard adopted under section 112. The court explained that, "[a]lthough both the NSPS and NESHAP rulemaking resulted in a PM emissions limit of 0.01 pounds per ton, EPA arrived at that limit using two different mechanisms," while acknowledging that "the final rule . . . noted that kilns would have to install fabric filter technology to comply with NESHAP, concluding that the parallel NSPS rule would therefore have no additional cost." *Id.*

In the current rulemaking, EPA is not proposing to control a pollutant already regulated under a different rule or program, but merely one that is incidentally reduced through regulations for another pollutant at certain sources. In fact, the two pollutants at issue here—methane and VOCs—are emitted in highly disparate quantities during oil and gas development and have differing environmental and public health impacts. Methane has powerful climate-disrupting properties, and it contributes to background ozone formation. By contrast, VOCs do not have significant direct climate-forcing effects, but are direct precursors to both localized ozone and fine particulate matter, and therefore have a major impact on soot and smog formation. Section 111(b) charges EPA with limiting dangerous pollution from new infrastructure. If the agency failed to address one or both of these pollutants from oil and gas sources, it would be falling short of its statutory mandate.

Response: The EPA has considered the commenter's statements, and agrees that there is a need to reduce methane emissions due to its contribution to climate change in addition to the existing VOC regulations that historically provided methane reductions as a co-benefit.

Commenter Name: Camilla Feibelman
Commenter Affiliation: Rio Grande Chapter of the Sierra Club
Document Control Number: EPA-HQ-OAR-2010-0505-6895
Comment Excerpt Number: 5

Comment: Why EPA Must Act in New Mexico

There are three main reasons why New Mexicans are counting on EPA to reduce and ultimately eliminate our emissions of methane.

First, it is a valuable product that we are wasting. While we are working toward a 100% renewable energy future, we do currently depend upon natural gas for our transportation, electricity, heating and cooling and chemical needs. As such, we should at the very least assure that the gas we are fracking or drilling through more conventional means is not escaping into the air. This is true not only of gas that is directly being targeted, but also of natural gas that exists in oil deposits, which is usually flared or vented when developers drill for oil. We use methane and thus we should be using it for our economy and taxing it fully for our schools and state budgets. Letting it flare, vent, or leak through fugitive emissions is not a good outcome.

While natural gas can never be considered a clean fuel because of its varied land, water and air impacts, it can be a cleaner fuel, and we should work to make it so. Similarly, the oil production process can be cleaner and less wasteful with regard to associated natural gas that is often produced alongside the oil deposits. The EPA proposed rules are a good first step on both fronts.

Here in New Mexico, we waste a significant amount of methane. In 2014, New Mexico's oil and gas producers reported wasting more than 180,000 metric tons of methane - enough to heat more than 168,000 homes each year. This lost methane also represents lost royalties to taxpayers. A recent report by the Western Values Project suggests New Mexico taxpayers have lost out on over $42.7 million in royalty revenue since 2009. Emissions from New Mexico's federal and tribal land remains largely unmanaged as well. The gas wasted each year is valued at $100 million and could be recaptured and brought to market with strong venting and flaring rules from BLM. New Mexico is home to 11 companies that specialize in methane mitigation. Policies that require drillers to use these tools and services could bolster this growing industry and provide highly skilled, good paying jobs to New Mexico.

The second primary reason to reduce methane emissions in addition to reducing wasted product is the impact of methane pollution on our climate. While there are various metrics for quantifying its effect, there is uniform agreement that methane is a much more potent climate-disrupting gas than carbon dioxide. According to the most recent report by the International Panel on Climate Change, methane has 86 times the climate-forcing effect of carbon dioxide on a 20-year basis and 34 times the effect on a century-long basis. We can and must deal with climate change, and we cannot do it without taking on methane. The oil and gas sector is the largest industrial source of methane emissions and cost-effective control techniques exist and are readily available. New Mexico is one of the most important states to oil and gas production. In New Mexico, we produced over 1 million barrels of oil in 2014 according to the U.S Energy Information Administration. We have a responsibility to deal with our methane emissions and their impact on the climate.

Third, these gases – and other gases associated with oil and gas production, processing, transmission, and storage – have more immediate health impacts beyond their impact on the climate. Methane itself accelerates the production of dangerous ground-level ozone, and VOCs

that are emitted alongside methane react in the atmosphere to form ozone and fine particulate matter. Methane is also emitted alongside hazardous air pollutants such as benzene, which is a known carcinogen, as well as several other toxic substances. Such emissions are dangerous for the health of communities and workers, having been linked to cancer, respiratory disease, and neurological damage. Methane pollution specifically contributes to the formation of smog, which causes asthma attacks, respiratory problems, permanent lung damage, and in extreme cases, premature death.

Over 180,000 NM residents already suffer from asthma, and in 2013 two counties in New Mexico had a combined 16 days that exceeded the national ozone standard, further exacerbating their disease. Thus, common-sense regulations to control methane will help reduce these other pollutants and reduce concentrations of ozone, particulate matter, and air toxics. Some of our cities do not currently comply with ozone standards designed to protect public health, and with EPA's recent revision of those standards, more of our cities will be out of compliance in the coming years. Cutting down on methane and associated emissions will help our cities comply and help protect our most vulnerable populations.

Response: The EPA has reviewed the comment, and agrees that reductions in methane emissions will contribute to the slowing of climate change. The EPA also agrees that reductions of methane and co-emitted species will provide air quality benefits. This rule will contribute towards protecting the nation's climate and air.

Commenter Name: Public Hearing Comments On Proposed Climate, Air Quality, and Permitting Rules for the Oil and Natural Gas Industry; Wednesday, September 23, 2015; 9:00 AM - 2:40 PM; Public Hearing #2 - Dallas, Texas
Commenter Affiliation: None
Document Control Number: EPA-HQ-OAR-2010-0505-7336
Comment Excerpt Number: 80

Comment: To begin, I would like to commend the EPA for their work to reduce methane and Volatile Organic Compounds, or VOC emissions, which will protect human health and reduce harmful climate change.

VOCs are a group of chemicals which can individually cause -- have adverse health defects, including liver, nervous system damage, cancer, headaches and nausea. When these are brought into the air, VOCs react to form ground level ozone or smog, which leads to asthma and premature death.

EPA's actions to limit VOC emissions from new and modified oil and gas resources will help limit these harmful health effects in the future.

Response: The EPA recognizes the commenter's support of its regulatory action, and agrees that reductions of methane and co-emitted species will provide air quality benefits. This rule will contribute towards protecting the nation's climate and air.

Commenter Name: Commissioner Robert J. Klee
Commenter Affiliation: Connecticut Department of Energy and Environmental Protection (DEEP)
Document Control Number: EPA-HQ-OAR-2010-0505-6870
Comment Excerpt Number: 5

Comment: In addition to greenhouse gas emission reductions, the Proposed Rule will also produce ozone concentration reductions that are critical to changing Connecticut's persistent ozone nonattainment status. Both the proposed VOC and methane emission reductions are important to ozone attainment efforts because the two pollutants address different geographic and time scales. VOCs, a direct ozone precursor, affect ozone concentrations regionally and in short (hourly) timeframes. Thus, VOC emission reductions from gas production and processing activities in states upwind of Connecticut, such as Pennsylvania and Ohio, are anticipated to contribute in the near future to lowering ambient ozone concentrations in Connecticut. Furthermore, methane reductions resulting from the Proposed Rule may reduce background ozone levels over future decades, assisting Connecticut to attain future ozone national ambient air quality standards.

To these ends, Connecticut supports the EPA's efforts under the Proposed Rule to properly address VOC and methane leakage from the oil and natural gas industry at a national level. Given the prevalence of oil and gas infrastructure in every state in the country, a strong regulatory foundation and a consistent national approach is needed to provide a critical baseline of environmental protection. Thank you for your time on and consideration of these important issues.

Response: The EPA recognizes the commenter's support of its regulatory action, and agrees that reductions of methane and co-emitted species will provide air quality benefits. This rule will contribute towards protecting the nation's climate and air.

Commenter Name: Michael J. Meyers, et al., Assistant Attorneys General
Commenter Affiliation: Attorneys Generals of New York, Massachusetts, Oregon, Rhode Island, and Vermont (States)
Document Control Number: EPA-HQ-OAR-2010-0505-6940
Comment Excerpt Number: 4

Comment: The Evidence Supports the Proposed Rule and Strengthening Aspects of It.

A. EPA's Decision to Directly Regulate Methane Emissions is Rational and Consistent with the Act.

In light of the significant contribution of the oil and natural gas source category's methane emissions to nationwide greenhouse gas emissions, which EPA has determined endanger public

health and welfare, and the President's commitment to cut methane emissions, the Proposed Rule properly determines that methane emissions should be addressed directly rather than as an incidental benefit to VOC reduction. 80 Fed. Reg. at 56,599. Indeed, as stated above, direct regulation of methane is required under the CAA.

In the 2012 NSPS rulemaking, EPA identified compressors (reciprocating and centrifugal) and pneumatic devices (controllers and pumps) in the natural gas transmission segment as equipment that emits large quantities of methane. But at the time, EPA declined to establish standards to limit these emissions based on its approach of focusing on reducing VOCs, which are largely removed prior to the natural gas reaching compressors and pneumatic devices in the transmission segment. See 77 Fed. Reg. at 49,522-23 (declining to regulate transmission compressors and pneumatics because of "the relatively low level of VOC emitted from these sources"). According to EPA, compressors emitted more than two million tons of methane in 2012, with more than fifty percent of that amount coming from the transmission segment. U.S. EPA Office of Air Quality Planning and Standards (OAQPS), Oil and Natural Gas Sector Compressors 43 (2014) [hereinafter Compressors White Paper]. Similarly, EPA estimates that pneumatic controllers are responsible for about thirteen percent of methane emissions from the oil and gas sector, while pneumatic pumps account for about sixteen percent of methane emissions from the production and processing segments. EPA OAQPS, Oil and Natural Gas Sector Pneumatic Devices 56-57 [hereinafter Pneumatic Devices White Paper].

Direct regulation of methane, rather than as a co-benefit to VOC reduction, enables EPA to regulate additional equipment, such as compressors and pneumatic devices, that are sources of significant amounts of methane emissions, but relatively low levels of VOCs. Direct regulation of such methane emissions is appropriate given the significant contribution that these emissions make to national greenhouse gas emissions and, as discussed below, the availability of proven, cost-effective emission reduction technologies.

Response: The EPA has reviewed the comment, and agrees that direct regulation of GHGs enables the reduction of additional methane emissions beyond what could be achieved by prior VOC-focused rules.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 20

Comment: Many of the Uncertainties and Problems Raised by EPA's Benefit Analysis Could be Reduced by Relying on VOC a Surrogate for Methane.

Reliance on VOC as a surrogate for methane would prevent the unnecessary imposition of duplicative regulations on many sources, saving EPA and regulated entities significant resources. As EPA clearly states in the Executive Summary of the draft RIA, the Agency is proposing new methane standards for certain emission sources that are currently regulated for VOC (i.e.,

hydraulically fractured gas well completions, equipment leaks at natural gas processing plants)." However, the RIA further states that it does not expect "any incremental benefits or costs as a result from regulating methane for currently regulated VOC sources." Why then is the EPA proposing new regulations for these numerous sources?

Proposing to impose additional methane regulations on already-regulated VOC sources despite its expectation of no incremental benefits or costs conflicts with Administration regulatory guidance. Executive Order No. 12866 instructs Agencies to "avoid regulations that are inconsistent, incompatible, or duplicative with its other regulations". More importantly, this same Executive Order instructs agencies to first "identify the problem it intends to address." If EPA cannot find any additional benefits from further regulation, admittedly, there is no problem worthy of additional regulation.

Response: Regarding the assertion that VOC standards are sufficient to control methane, please see the response to DCN EPA-HQ-OAR-2010-0505-6927, Excerpt 6 which includes reference to the preamble section IV.D (Establishing GHG Standards in the Form of Limitations on Methane Emissions).

2.2 PSD and Title V Permitting

Commenter Name: Shannon S. Broome, Executive Director, Robert J. Morehouse, Director
Commenter Affiliation: Air Permitting Forum (APF)
Document Control Number: EPA-HQ-OAR-2010-0505-6952
Comment Excerpt Number: 2

Comment: In the interest of fair notice and to avoid uncertainty in the regulatory community, the Agency should clarify its position on three key permitting-related implications of the direct regulation of methane. First, EPA should clarify that it does not intend methane emissions alone to cause sources to be major stationary sources under the PSD program or major sources under the Title V permitting program. Second, EPA should confirm that a modification to an existing major stationary source does not require the source to obtain a PSD permit based only on an increase in methane emissions. Third, the Agency should confirm that the direct regulation of methane does not subject methane to a significance level of zero. The preamble, regulatory language, and other docketed materials do not explicitly address the intended results of this Proposed Rule on PSD or Title V permitting requirements.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

Commenter Name: Shannon S. Broome, Executive Director, Robert J. Morehouse, Director
Commenter Affiliation: Air Permitting Forum (APF)
Document Control Number: EPA-HQ-OAR-2010-0505-6952
Comment Excerpt Number: 3

Comment: EPA Should Confirm That The Regulation of Methane Emissions in this NSPS Does Not Cause Methane Emissions to Convert Minor Sources to Major Sources for purposed of PSD and Title V or Trigger PSD Modification Provisions.

As EPA has not directly addressed the implications of this regulatory action on PSD or Title V permitting in the preamble or regulatory language of the Proposed Rule, it appears the Agency does not intend the regulation of methane under this new source performance standard (NSPS) to implicate PSD or Title V permitting requirements. APF agrees that this rulemaking should not transform minor sources into major sources and that major sources should not trigger PSD and as a result of a physical or operational change that increases methane emissions and urges the Agency to provide this clarification.

It is particularly important that EPA include this clarification in light of *Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014) (*UARG*). In *UARG*, the Supreme Court rejected EPA's

reading of the CAA that would have allowed GHGs to cause a source to be subject to the PSD and Title V permitting programs. The Court found the statutory provisions establishing major source levels to be clear on their face and concluded that the Agency exceeded its authority when it substituted these statutory thresholds for its own via the Tailoring Rule. *See id.* at 2445. While EPA has removed some portions of the Tailoring Rule invalidated in *UARG*, EPA has not resolved its position in the post-*UARG* regime. EPA cannot, therefore, take the position that methane emissions can trigger PSD without first offering a statutory interpretation that would reconcile the Agency's approach with the holding in *UARG*.

While we note that EPA should have made a separate endangerment finding for methane (and for methane from this source category). Nevertheless, clarification is required on this point, as explained in Footnote 1, EPA has suggested in the preamble to the Proposed Rule that methane could be treated as part of the group of GHGs. EPA adopted a similar approach in a CAA Section 111(b) rulemaking for carbon dioxide emissions from Electric Generating Units. *See* EPA, *Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units; Final Rule*, 80 Fed. Reg. 64,510 (Oct. 23, 2015). There, EPA included a provision specifying that the pollutant regulated is GHGs in the form of a limit on carbon dioxide. *See* 40 C.F.R. § 60.5515. As it did then, EPA should adopt the following language:

Which pollutants are regulated by this subpart?

(a) The pollutants regulated by this subpart are greenhouse gases. The greenhouse gas standard in this subpart is in the form of a limitation on emissions of methane.

(b) *PSD and title V thresholds for greenhouse gases.* (1) For the purposes of 40 CFR 51.166(b)(49)(ii), with respect to GHG emissions, the "pollutant that is subject to the standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is subject to regulation under the Act as defined in § 51.166(b)(48) of this chapter and in any SIP approved by the EPA that is interpreted to incorporate, or specifically incorporates, § 51.166(b)(48).

(2) For the purposes of 40 CFR 52.21(b)(50)(ii), with respect to GHG emissions, the "pollutant that is subject to the standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is subject to regulation under the Act as defined in § 52.21(b)(49) of this chapter.

(3) For the purposes of 40 CFR 70.2, with respect to greenhouse gas emissions, the "pollutant that is subject to any standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is "subject to regulation" as defined in 40 CFR 70.2.

(4) For the purposes of 40 CFR 71.2, with respect to greenhouse gas emissions, the "pollutant that is subject to any standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is "subject to regulation" as defined in 40 CFR 71.2.

EPA should address this issue now so that states and regulated entities can rely on EPA's position and can implement these programs uniformly. Indeed, EPA has recognized the importance of providing clarity on this point and has made similar clarifications in other NSPS rulemakings. *See* 80 Fed. Reg. at 64,630; *see also* 40 C.F.R. § 60.5515.

Moreover, the above approach is consistent with Congress's vision for PSD permitting, as Congress never contemplated these major source permitting programs to impose the regulatory burdens associated with permitting on small sources. Indeed, as the D.C. Circuit observed in *Alabama Power*, "Congress was concerned with large industrial enterprises." *Ala. Power Co. v. EPA*, 636 F.2d. 323, 354 (D.C. Cir. 1980).

A preferred solution, and one that would avoid all implications for PSD and Title V permitting, would be to eliminate methane from this Proposed Rule. This approach is particularly appropriate in light of the fact that EPA concedes that regulating methane will not result in additional methane reductions. *See* EPA, *Regulatory Impact Analysis of the Proposed Emission Standards for New and Modified Sources in the Oil and Natural Gas Sector* at 1-1 (Aug. 2015) ("In addition, we are proposing methane standards for certain emission sources that are currently regulated for VOC (*i.e.,* hydraulically fractured gas well completions, equipment leaks at natural gas processing plants). However, we do not expect any incremental benefits or costs as a result from regulating methane for currently regulated VOC sources.").

Given the importance of this issue, we urge the Agency to clarify in the preamble of the final rule that this regulatory action will not cause methane to trigger PSD and Title V permitting.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

Regarding the assertion that EPA must make an endangerment finding for methane as an individual gas, see the response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 6.

Regarding the assertion that VOC standards are sufficient to control methane, please see EPA's response to DCN EPA-HQ-OAR-2010-0505-6927, Excerpt 6 which includes reference to the preamble section IV.D (Establishing GHG Standards in the Form of Limitations on Methane Emissions).

Commenter Name: Shannon S. Broome, Executive Director, Robert J. Morehouse, Director
Commenter Affiliation: Air Permitting Forum (APF)
Document Control Number: EPA-HQ-OAR-2010-0505-6952
Comment Excerpt Number: 4

Comment: EPA Should Clarify That the Significance Threshold for GHGs as a Group Applies to Methane for Anyways Sources.

The Tailoring Rule addresses GHGs as a group and does not specify whether a single GHG can be evaluated under the Rule. It is critical that EPA clarify that the 75,000 tons per year (tpy) CO2-e significance threshold applies to methane emissions regulated alone to avoid uncertainty over the application of the Tailoring Rule to methane. *See* 40 C.F.R. § 52.21(b)(49)(iii) ("For the pollutant GHGs, an emissions increase shall be based on tpy CO2-e, and shall be calculated assuming the pollutant GHGs is a regulated NSR pollutant, and 'significant' is defined as 75,000 tpy CO2-e instead of applying the value in paragraph (b)(23)(ii) of this section." (emphasis added)).

EPA establishes emissions levels for regulated pollutants in Section 52.21(b)(23) for purposes of determining whether a physical change results in an increase in emissions. While EPA has established specific significance levels for certain pollutants, (*e.g.*, 100 tpy for carbon monoxide (CO), 40 tpy for nitrogen oxides (NOx)), for those pollutants not specifically listed in Section 52.21(b)(23)(i), Section 52.21(b)(23)(ii) defines a "significant" emissions level as, "in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant that paragraph (b)(23)(i) of this section, does not list, any emissions rate." 40 C.F.R. §§ 52.21(b)(23)(i), (ii) (emphasis added). Application of this provision would cause absurd results. Thus, it is important that EPA clarify that methane is to be regulated as part of the group of GHGs and does not require an independent emissions threshold to avoid application of the zero significance threshold.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 4

Comment: EPA Should Clarify That the Regulatory Actions in This New Source Performance Standard Related to Methane Do Not Trigger Prevention of Significant Deterioration (PSD) and Title V Permitting Applicability and That the Tailoring Rule Significance Levels for Greenhouse Gases (GHGs) as a Group Apply to Methane.

It is TXOGA's understanding that EPA does not intend for the direct regulation of methane under NSPS to:

1. cause sources that would be "major" for methane alone to be considered major stationary sources under the PSD program or major sources under the Title V permitting program;
2. cause sources that are already major stationary sources for purposes of PSD program to require a PSD permit if a modification causes emissions of only methane to increase by the significance level; or
3. require a new significance level to be set solely for methane.

Unfortunately, the preamble language and regulatory language do not make these intended results explicit, and they must, as the regulation of methane in this rule has the potential for implications not only for the oil and gas sector but also for all industrial operations.

A. This Regulatory Action Does Not (and Cannot) Cause Otherwise Minor Sources to Become Major Sources for Purposes of PSD and Title V Based on Methane Emissions or to Cause Existing Major Sources to Trigger PSD Modification Provisions Based Solely on Methane Emissions.

As indicated above, because the proposed preamble and regulatory language (or other docketed materials) do not speak comprehensively to the implications of the direct regulation of methane, it appears that the Agency believes its regulation of methane in the NSPS will not result in methane triggering PSD or Title V permitting requirements. TXOGA agrees that regulation of methane under the NSPS should not cause sources that would otherwise be minor sources for purposes of PSD and Title V to become major sources or that otherwise major sources could trigger PSD solely because of a physical or operational change that increases methane emissions.

In *Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014) (UARG), the U.S. Supreme Court rejected EPA's interpretation of the Clean Air Act (CAA or the Act) that would have caused GHGs on their own to cause a source to be subject to PSD and Title V permitting. The Court further found that EPA's authority did not extend to rewriting statutory provisions that were clear on their face as to the major source levels, even if well motivated as an attempt to account for the ubiquitous nature of GHG emissions compared with pollutants that traditionally have been regulated under PSD and Title V.

Whether or not EPA uses this rulemaking to establish a permissible statutory interpretation as to why GHGs do not on their own cause a source to trigger PSD or Title V permitting, it is important for EPA to make clear to states and regulated entities that EPA's action of directly regulating methane does not mean that methane on its own can cause a source to be considered major for PSD and Title V purposes or that a PSD major modification can be caused solely due to an increase in methane emissions following a physical operational change.

Even though EPA should have made a separate endangerment finding for methane and a significant contribution finding for methane from this source category, the issue of permitting still must be clarified. EPA could clarify that methane should be treated as part of the group of GHGs by adopting an approach similar to the one it took in the CAA Section 111(b) rulemaking for carbon dioxide emissions from Electric Generating Units (EGUs). There, EPA added a regulatory provision clarifying that the pollutant regulated is GHGs, which was simply taking the form of a limit on carbon dioxide. As explained in footnote 2, above, EPA has already stated as

much in the preamble to this proposed rule. Specifically, EPA should adopt the following language in any final rule:

Which pollutants are regulated by this subpart?

> (a) The pollutants regulated by this subpart are greenhouse gases. The greenhouse gas standard in this subpart is in the form of a limitation on emissions of methane.
>
> (b) *PSD and title V thresholds for greenhouse gases*. (1) For the purposes of 40 CFR 51.166(b)(49)(ii), with respect to GHG emissions, the "pollutant that is subject to the standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is subject to regulation under the Act as defined in § 51.166(b)(48) of this chapter and in any SIP approved by the EPA that is interpreted to incorporate, or specifically incorporates, § 51.166(b)(48).
>
> (2) For the purposes of 40 CFR 52.21(b)(50)(ii), with respect to GHG emissions, the "pollutant that is subject to the standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is subject to regulation under the Act as defined in § 52.21(b)(49) of this chapter.
>
> (3) For the purposes of 40 CFR 70.2, with respect to greenhouse gas emissions, the "pollutant that is subject to any standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is "subject to regulation" as defined in 40 CFR 70.2.
>
> (4) For the purposes of 40 CFR 71.2, with respect to greenhouse gas emissions, the "pollutant that is subject to any standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is "subject to regulation" as defined in 40 CFR 71.2.

We note that such action is appropriate here because treating methane as a "triggering" pollutant would be inconsistent with congressional intent, bringing into the PSD and Title V programs numerous sources that Congress never contemplated as sufficiently large to justify the regulatory burdens associated with these major source programs. The U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) has "clearly discern[ed]" Congress's vision for PSD permitting. "Congress was concerned with large industrial enterprises." Obviously, smaller sources like oil and gas well sites do not fit within this category.

To the extent EPA takes the position that methane can trigger PSD directly as a result of this rulemaking, the Agency cannot do so until it articulates a statutory interpretation that reconciles the group of GHG emissions and CO_2 specifically not triggering PSD but allows methane to do so. As TXOGA suggested in an amicus brief in the *UARG* case, the view that only National Ambient Air Quality Standards (NAAQS) pollutants could trigger PSD, recognizing that locally impacting air pollutants were the focus of the PSD program, could be a basis for excluding these emissions from PSD triggering activities.

A preferred solution would be to remove methane from the proposed rule and maintain the "natural gas as a surrogate for VOC" concept in the 2012 NSPS. Indeed, EPA admits that regulating methane will not result in additional methane reductions. Should EPA determine that regulation of VOC alone is sufficient to achieve the desired VOC and methane reductions, EPA can avoid the PSD and Title V implications by revising the rule accordingly.

In any event, it is critical for EPA to be clear about the implications of this rulemaking and to take whatever steps are necessary to ensure that methane does not trigger PSD or Title V permitting directly.

B. To the Extent EPA Proceeds with Issuance of this NSPS, the Significance Threshold for GHGs as a Group Should Apply to Methane for Anyway Sources.

As written, the Tailoring Rule applies to GHGs in the aggregate and does not speak to whether an individual GHG, such as methane, may be evaluated under the proposed rule. Importantly, EPA also has not established a significant emissions level for methane alone. As discussed above, EPA needs to clarify that the carbon dioxide equivalent ($CO_{2\text{-}e}$) significance threshold is applicable to methane when regulated on its own (*e.g.*, by making the clarification noted in subsection A, above). It is incumbent upon EPA to include a provision in the final Subpart OOOOa rule that explicitly states that the Tailoring Rule applies to avoid unnecessary confusion and uncertainty.

For purposes of determining whether an increase in emissions resulting from a physical or operational change triggers PSD permitting, 40 C.F.R. § 52.21(b)(23)(i) defines what constitutes the "significant" emissions level for specific pollutants. For pollutants that EPA has regulated in the past, it has established a significance level, *e.g.*, 100 tons per year (tpy) for carbon monoxide (CO), 40 tpy for nitrogen oxides (NO_X), 10 tpy for hydrogen sulfide (H_2S). For those pollutants *not listed* in 40 C.F.R. § 52.21(b)(23)(i), 40 C.F.R. § 52.21(b)(23(ii) defines what constitutes a "significant" emissions level: "Significant means, in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant that paragraph (b)(23)(i) of this section, does not list, <u>any emissions rate</u>." (emphasis added).

Under 40 C.F.R. § 52.21(b)(49)(i), EPA defined the significant emissions level for GHGs defined as the aggregate group of six:

> *Greenhouse gases* (GHGs), the air pollutant defined in §86.1818-12(a) of this chapter as the aggregate group of six greenhouse gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, shall not be subject to regulation except as provided in paragraphs (b)(49)(iv) through (v) of this section and shall not be subject to regulation if the stationary source maintains its total source-wide emissions below the GHG PAL level, meets the requirements in paragraphs (aa)(1) through (15) of this section, and complies with the PAL permit containing the GHG PAL.

This significant emissions level is defined as follows:

> The term emissions increase as used in paragraphs (b)(49)(iv) through (v) of this section shall mean that both a significant emissions increase (as calculated using the procedures in paragraph (a)(2)(iv) of this section) and a significant net emissions increase (as defined in paragraphs (b)(3) and (b)(23) of this section) occur. For the pollutant GHGs, an emissions increase shall be based on tpy CO_{2-e}, and shall be calculated assuming the pollutant GHGs is a regulated NSR pollutant, and 'significant' is defined as 75,000 tpy CO_{2-e} instead of applying the value in paragraph (b)(23)(ii) of this section.

To the extent EPA takes the position that PSD will apply to the direct regulation of methane in this regulatory action, it is important that EPA make clear the Tailoring Rule's existing provisions apply to methane as part of the group of GHGs and that methane does not require its own significance level in order to avoid having a zero significance level.

In sum, EPA needs to be explicit that finalization of this proposed rule will not lead to triggering of PSD or Title V except for "anyway sources." This is easily accomplished, as EPA has shown by the language it included in the CAA Section 111(b) rule for EGU CO_2 emissions. Moreover, sound policy and basic principles of government administration dictate that this issue be addressed before EPA issues any final rulemaking.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

Regarding the assertion that EPA must make an endangerment finding for methane as an individual gas, see the response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 6.

Regarding the assertion that VOC standards are sufficient to control methane, please see EPA's response to DCN EPA-HQ-OAR-2010-0505-6927, Excerpt 6 which includes reference to the preamble section IV.D (Establishing GHG Standards in the Form of Limitations on Methane Emissions).

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 9

Comment: EPA Needs to Address Permitting Implications Associated with Regulation of Methane

Issue – EPA has not addressed the possible permitting implications that would flow from of the direct regulation of methane. Unintended implications could include allowing methane alone to trigger PSD and Title V permitting for all sources, not just oil and natural gas sources, which would greatly increase permitting burdens and result in costs that EPA did not consider in the rulemaking. API has raised PSD permitting issues previously with the EPA and understands that EPA does not intend for NSPS OOOOa to trigger PSD and Title V permitting applicability as that runs counter to both Congressional intent and judicial precedent. Agencies and states cannot handle an increased permitting burden, and such a trigger would drastically increase the number of permits submitted, not only for the oil and natural gas sector, but for all sectors.

Recommendation – As a threshold matter, API presents the following solution to the PSD and Title V permitting issues without conceding its position that EPA is required to make a separate endangerment finding for methane and a significant contribution finding for methane from this source category. To address the possible PSD and Title V permitting implications, EPA should adopt an approach similar to that taken in the Clean Power Plan (NSPS Subpart TTTT). Specifically, EPA should make it clear that the pollutant being regulated under NSPS OOOOa is the group of six GHGs. EPA should also make it explicitly clear that methane is being used as a surrogate for the group of six. Additionally, EPA should include an explanation as well as a provision in the final rule that extends the Tailoring Rule to cover regulation of GHGs under NSPS OOOOa.

EPA MUST INCLUDE A PROVISION IN SUBPART OOOOA TO ENSURE THE TAILORING RULE FRAMEWORK IN THE PSD AND TITLE V PERMITTING RULE APPLY AND THAT METHANE ALONE WILL NOT TRIGGER PSD OR TITLE V PERMITTING

Pollutants that are subject to the prevention of significant deterioration ("PSD") permitting program are identified in EPA's PSD rules in the definition of "regulated NSR [new source review] pollutant." 40 C.F.R. §§ 52.21(b)(50), 51.166(b)(49). That definition has four Subparts, the second of which covers pollutants regulated under section 111. The fourth Subpart covers "[a]ny pollutant that is otherwise subject to regulation under the Act."

EPA's Tailoring Rule limits the number of sources required to obtain PSD permits due to GHG emissions under the *fourth* Subpart of the "regulated NSR pollutant" definition. Similarly, the Tailoring Rule in the Title V rules limits the number of sources required to obtain Title V permits by incorporating the term "subject to regulation" in the definition of major source. After the Supreme Court's decision in *Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014) (and subsequent remand proceedings before the D.C. Circuit), part of the original Tailoring Rule remains in effect. A source cannot trigger PSD and Title V permitting requirements solely because of its GHG emissions; only emissions of non-GHG pollutants can trigger PSD and Title V requirements. Moreover, where non-GHG emissions trigger PSD and Title V permitting requirements for a so-called "anyway source," that source's GHG emissions will be subject to PSD and Title V permitting requirements only if the source emits GHGs in excess of 75,000 tons per year of carbon dioxide equivalent.

In the PSD rules, the *second* Subpart of the "regulated NSR pollutant" has no Tailoring Rule equivalent in Part 51 or 52. EPA has recognized this gap and stated it intends to conduct a rulemaking to set a *de minimis* threshold for GHGs that would apply to all four Subparts of the definition for all types of sources. 80 Fed. Reg. at 64630. EPA has not yet conducted a rulemaking to address this issue, however.

Thus, when EPA finalized NSPS Subpart TTTT, which addresses carbon dioxide emissions from new electric generating units, it included language in Subpart TTTT to make clear that the "anyway" source framework applies to the second part of the "regulated NSR pollutant" definition. Similarly, the EPA included in the language a provision to make clear the "anyway" source framework applies in the Title V regulation as well. *See id.*

EPA must also ensure their action of naming only methane in Subpart OOOOa cannot trigger PSD or Title V permitting and instead that methane should be considered a surrogate for the existing group of six greenhouse gas pollutants. Such a fix was included in the final NSPS Subpart TTTT by adding language to clarify the pollutant being regulated by the Subpart is greenhouses gases in the form of a limitation on emissions of carbon dioxide. A similar clarification should be added to Subpart OOOOa, as well as a discussion in the preamble, to ensure methane on its own cannot cause a source to be considered major for PSD and Title V purposes and that a PSD major modification cannot be caused solely due to an increase in methane emissions.

API proposes the following specific rule language to correct the issue, modeled after NSPS TTTT:

Which pollutants are regulated by this Subpart?

(a) The pollutants regulated by this Subpart are greenhouse gases. The greenhouse gas standard in this Subpart is in the form of a limitation on emission of methane.

(b) *PSD and title V thresholds for greenhouse gases.* (1) For the purposes of 40 CFR 51.166(b)(49)(ii), with respect to GHG emissions, the "pollutant that is subject to the standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is subject to regulation under the Act as defined in § 51.166(b)(48) of this chapter and in any SIP approved by the EPA that is interpreted to incorporate, or specifically incorporates, § 51.166(b)(48).

(2) For the purposes of 40 CFR 52.21(b)(50)(ii), with respect to GHG emissions, the "pollutant that is subject to the standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is subject to regulation under the Act as defined in § 52.21(b)(49) of this chapter.

(3) For the purposes of 40 CFR 70.2, with respect to greenhouse gas emissions, the "pollutant that is subject to any standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is "subject to regulation" as defined in 40 CFR 70.2.

(4) For the purposes of 40 CFR 71.2, with respect to greenhouse gas emissions, the "pollutant that is subject to any standard promulgated under section 111 of the Act" shall be considered to be the pollutant that otherwise is "subject to regulation" as defined in 40 CFR 71.2.

As further support for this clarification, in the preamble to the final Subpart TTTT, EPA recognized that EPA "will need to consider adding provisions like 40 CFR 60.5515 to other Subparts of part 60" until it undertakes the broadly applicable rulemaking it is considering. 80 Fed. Reg. at 64630. The Subpart TTTT approach should be taken in Subpart OOOOa because it would confirm in regulatory language that States do not need to amend their existing state implementation plans.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

Regarding the assertion that EPA must make an endangerment finding for methane as an individual gas, see the response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 6.

Commenter Name: Thure Cannon, President
Commenter Affiliation: Texas Pipeline Association (TPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6927
Comment Excerpt Number: 11

Comment: Under Subpart OOOOa, methane for the first time would become a pollutant subject to a standard promulgated under Section 111, which presents the question of whether § 5l.166(b)(49)(ii) (the "NSPS trigger") would create a separate new basis for determining applicability of PSD or Title V to sources of methane emissions.

Currently methane emissions are regulated as a GHG under EPA's Tailoring Rule, which consistent with the Supreme Court's decision in *Utility Air Regulatory Group* v. *EPA,* 134 S.Ct. 2427 (2014), does not treat GHGs as an air pollutant for purposes of determining whether a source is a major source for the purpose of PSD applicability. Instead PSD permits, otherwise required for pollutants other than GHGs, contain limitations of GHG emissions based on the application of BACT. At the present time, this BACT review is only performed on "PSD anyway" sources with GHGs emissions in excess of 75,000 CO_2e. With the finalization of the Subpart OOOOa regulations establishing an NSPS for methane, however, there is potentially a new independent trigger for PSD applicability under the NSPS trigger provision of the above rule.

EPA has failed to address the ambiguity between the Tailoring Rule and the NSPS trigger for determining PSD applicability for methane emissions under proposed Subpart OOOOa even

though it did so comprehensively when it proposed and adopted Subpart TTTT, the NSPS for new power plants, which newly subjected carbon dioxide to Section 111 standards. In that rulemaking, EPA addressed the tension between the NSPS trigger provision and the Tailoring Rule for the newly regulated pollutant, carbon dioxide, by discussing it at length in the proposal and adoption preambles for Subpart TTTT and by adopting a final rule that provided that the Tailoring Rule thresholds governed PSD and Title V applicability for affected sources under that subpart. Thus, EPA put to bed the question of whether finalization of NSPS carbon dioxide emissions from new power plants would have an impact on the operation of the Tailoring Rule, concluding that it would not. EPA noted in the preamble to the final Subpart TTTT rules that it was "finalizing provisions in part 60 of its regulations that make clear that the threshold for determining whether a PSD source must satisfy the BACT requirement for GHGs continues to apply after promulgation of this rule."

TPA is very concerned that while EPA directly addressed this issue in Subpart TTTT, it has not even mentioned the issue in the proposed new NSPS for the GHG methane in Subpart OOOOa. EPA failed to take this action even though it stated in the final Subpart TTTT preamble that a rule such as 40 C.F.R. § 60.5515 may be necessary to add to other subparts of part 60 in the event that EPA has not yet developed a comprehensive resolution. In light of EPA's failure to address the PSD and Title V implications of this proposed rule, we believe that this rulemaking cannot and should not go forward in its present state. The impact that new NSPS for methane would have on PSD and Title V permitting is too important to be left unaddressed. There are three alternative approaches that EPA could take:

1. Stay the current rulemaking process and re-propose Subpart OOOOa to address the potential PSD *I* Title V implications noted above. In its new proposal EPA would need to address the issue in the preamble and add a new rule providing that the 75,000 CO_2e threshold for anyway sources will continue to apply and that anyway sources with less than 75,000 tpy CO_2e are not subject to BACT for GHG emissions even upon promulgation of an NSPS for methane. EPA could use language similar or identical to the language it used for this purpose in the Subpart TTTT preambles and final rule, at 40 CFR § 60.5515(b).
2. Stay the current rulemaking process pending revisions to the Tailoring Rule. In the Subpart TTTT rulemaking, EPA states that it is moving forward "to propose a GHG Significant Emission Rate (SER) that would establish a *de minimis* threshold level for permitting GHG emissions under PSD." According to EPA, its forthcoming rule will restructure the GHG provisions in the PSD regulations "so that the *de minimis* threshold for GHGs will not reside within the definition of 'subject to regulation.' This restructuring will be designed to make the PSD regulatory provisions on GHGs universally applicable, without regard to the particular subparts of the definition of 'regulated NSR pollutant' that may cover GHGs." As EPA notes, completing a comprehensive PSD rule that will address all of the implications of the Supreme Court decision in *Utility Air Regulatory Group* "will be most efficient for the EPA and the states ...." That efficiency would be even further enhanced by staying the current rulemaking to allow the PSD revisions to go forward and be finalized. In fact, EPA acknowledges in the Subpart TTTT rulemaking that if its universally applicable PSD rule is not complete before EPA proposes additional Clean Air Act Section 111 standards for GHGs, it will need to consider adding provisions

like 40 CFR § 60.5515 to other subparts of part 60. However, EPA has not done so here. TPA would urge EPA to do so.

3. (TPA's preferred option). Proceed with the current Subpart OOOOa rulemaking process but do not finalize any of rules that directly regulate methane emissions. This would be the simplest and cleanest approach. It would eliminate the potential applicability of PSD & Title V altogether because there would be no new NSPS coverage for methane. The NSPS trigger would not even come into play. This approach would not reduce the environmental benefits otherwise provided by Subpart OOOOa because, as EPA has made clear, the proposed BSER controls for VOC emissions are equally effective at controlling methane. In other words, the control of methane emissions in this NSPS is not additive in terms of environmental protections. In this case, adding another named pollutant is little more than symbolic. Eliminating methane regulations from Subpart OOOOa would remove an implementation problem while retaining all of the environmental benefits of the proposed rules.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, the EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs. As we noted in section V.M of the final rule preamble, the proposed rule stated that the pollutant we were proposing to regulate was GHG, not methane. *See* 80 FR 56593, 56600-01 (Sept. 18, 2015). The EPA therefore does not believe that a stay or re-proposal is necessary to make these clarifications.

Regarding the assertion that VOC standards are sufficient to control methane, please see the EPA's response to DCN EPA-HQ-OAR-2010-0505-6927, Excerpt 6 which includes reference to the preamble section IV.D (Establishing GHG Standards in the Form of Limitations on Methane Emissions).

Commenter Name: Kari Cutting
Commenter Affiliation: North Dakota Petroleum Council (NDPC)
Document Control Number: EPA-HQ-OAR-2010-0505-6789
Comment Excerpt Number: 5

Comment: One of the primary concerns of NDPC and its members is EPA's failure to make clear that the Proposed NSPS OOOOa will not trigger permitting under EPA's PSD and Title V permitting programs. The Proposed NSPS OOOOa is the first time EPA proposes to directly regulate methane under the CAA:

[T]he current methane emissions from this industry contribute substantially to nationwide GHG emissions. These emissions are expected to increase as a result of the rapid growth of this industry. While the VOC standards in the 2012 NSPS also reduce methane emissions, in light of the current and projected future methane emissions from the oil and natural gas industry,

reducing methane emissions from this source category cannot be treated simply as an incidental benefit to VOC reduction; rather, it is something that should be directly addressed through standards for methane under section 111(b) based on direct evaluation of the extent and impact of methane emissions from this source category and the best system for their reduction.

Under EPA's PSD and Title V programs, stationary sources that emit or have the potential to emit a pollutant at a level that is equal to or greater than specified thresholds are subject to major source requirements, including the application of best available control technology ("BACT"). Furthermore, any source that triggers PSD for any one pollutant must also apply BACT to any increase in any other regulated emissions, including GHG emissions. Unless clarified by EPA, once an NSPS regulates GHGs, GHGs (or individual components of GHGs) could be considered for purposes of triggering PSD and Title V. To do so would subject thousands of minor sources to unnecessary and unduly burdensome control and permitting requirements as well as trigger major permitting exercises for existing major sources.

This issue has been addressed in historic and recent rulemakings, although not fully resolved. EPA's 2010 Title II regulations addressing GHG emissions from auto and light duty trucks (and subsequently for other mobile sources) (the "Tailoring Rule") was challenged in court on the basis, inter alia, that EPA inappropriately regulated GHGs in the context of the PSD program under the CAA. In Utility Air Regulatory Group v. EPA (UARG), the U.S. Supreme Court struck down the EPA's interpretation of the PSD provisions of the CAA because the interpretation had the effect of applying the PSD requirements to a large numbers of small sources that previously had not been subject to PSD, and because, according to the Court, the EPA acknowledged that Congress did not intend that such sources be subject to the PSD requirements.

In response to the Supreme Court's decision in UARG, EPA decided to implement only Step 1 of its Tailoring Rule, which includes the "anyway sources," such that the "anyway sources" would still be subject to PSD requirements for the pollutant GHGs (as EPA has defined the term) if a PSD permit were otherwise required for a non-GHG pollutant and there was a significant increase of GHG emissions. EPA has not to date, however, undertaken a rulemaking to determine nor has the agency otherwise announced the legal interpretation of the statute that would provide the basis for applying PSD to "anyway" sources.

EPA's recent final NSPS rule applicable to Electric Utility Generating Units also addressed, but did not resolve, this issue. Addressing the UARG decision, EPA states:

While the PSD rulemaking described above is pending, the EPA and approved state, local, and tribal permitting authorities will still need to implement the BACT requirement for GHGs. In order to enable permitting authorities to continue applying the 75,000 tpy CO_2e threshold to determine whether BACT applies to GHG emissions from an "anyway source" after GHGs are subject to regulation under CAA section 111, the EPA has concluded that it continues to be appropriate to adopt the proposed language in 40 CFR 60.5515 (subpart TTTT).

EPA acknowledges that the commenter's concern will not be fully addressed for an interim period of time, but (for the reasons discussed above) the part 60 provisions adopted in this rule

are sufficient to make explicit that the 75,000 tpy CO_2e BACT applicability level for GHGs will apply to GHGs that are subject to regulation under the CAA section 111 standards adopted in this rule.

In North Dakota, allowing methane to trigger PSD and Title V requirements would be particularly burdensome. If methane alone could trigger PSD permitting, many operators could exceed PSD and Title V thresholds, and would be subject to the unduly burdensome requirements of PSD and Title V permitting. This could result in significant obstacles to oil and gas production in the state, causing delays in development or rendering development prohibitively time consuming and expensive.

Specifically, and without conceding its position that EPA is required to make a separate endangerment finding for methane and for methane from this source category, NDPC strongly encourages EPA to adopt an approach similar to that taken in the Clean Power Plan (NSPS Subpart TTTT), clarify the pollutant being regulated under Proposed NSPS OOOOa is the group of GHG emissions (in the form of methane), and include an explanation as well as a provision in the final rule that will address this issue in the context of the Tailoring Rule. Similar to the NSPS rule applicable to Electric Utility Generating Units, EPA must clarify that its intention for the Proposed NSPS OOOOa is likewise that GHG emissions will be subject to PSD and Title V permitting requirements only if they are an "anyway source."

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

Regarding the assertion that EPA must make an endangerment finding for methane as an individual gas, see the response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 6.

Commenter Name: J. Roger Kelley
Commenter Affiliation: Domestic Energy Producer's Alliance (DEPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6793
Comment Excerpt Number: 4

Comment: Of primary concern to the DEPA and its members is EPA's failure to address the implications of Proposed NSPS OOOOa on EPA's Prevention of Significant Deterioration ("PSD") and Title V permitting programs. EPA has an obligation to be clear regarding the implications of NSPS OOOO and OOOOa on PSD and Title V, and DEPA respectfully requests that EPA clarify that it does not intend for methane alone to trigger PSD and Title V permitting under the Clean Air Act ("CAA" or the "Act").

Under EPA's PSD and Title V programs, stationary sources that emit or have the potential to emit a pollutant at a level that is equal to or greater than specified thresholds are subject to major source requirements, including the application of best available control technology ("BACT"). Furthermore, any source that triggers PSD for any one pollutant must also apply BACT to any increase in any other regulated emissions, including GHG emissions. EPA's regulations expressly recognize that certain sources may take enforceable limits on hours of operation in order to avoid triggering CAA obligations that would otherwise apply to the source. Unless clarified by EPA, once an NSPS regulates GHGs, GHGs (or individual components of GHGs) may be considered for purposes of triggering PSD and Title V. To do so would subject thousands of minor sources to unnecessary and unduly burdensome control and permitting requirements.

This issue has been addressed in historic and recent rulemakings, although not fully resolved. EPA's 2010 Title II regulations addressing GHG emissions from auto and light duty trucks (and subsequently for other mobile sources) (the "Tailoring Rule") was challenged in court on the basis, inter alia, that EPA inappropriately regulated GHGs in the context of the PSD program under the CAA. In UARG, the U.S. Supreme Court struck down the EPA's interpretation of the PSD provisions of the CAA because the interpretation had the effect of applying the PSD requirements to a large numbers of small sources that previously had not been subject to PSD, and because, according to the Court, the EPA acknowledged that Congress did not intend that such sources be subject to the PSD requirements.

In response to the Supreme Court's decision in UARG, EPA decided to implement only Step 1 of its Tailoring Rule, which includes the "anyway sources," such that the "anyway sources" would still be subject to PSD requirements for the pollutant GHGs (as EPA has defined the term) if a PSD permit were otherwise required for a non-GHG pollutant and there was a significant increase of GHG emissions. EPA has not to date, however, undertaken a rulemaking to determine nor has the agency otherwise announced the legal interpretation of the statute that would provide the basis for applying PSD to "anyway" sources.

EPA's recent final NSPS rule applicable to Electric Utility Generating Units also addressed but did not resolve this issue. Addressing the UARG decision, EPA states:

> While the PSD rulemaking described above is pending, the EPA and approved state, local, and tribal permitting authorities will still need to implement the BACT requirement for GHGs. In order to enable permitting authorities to continue applying the 75,000 tpy CO2e threshold to determine whether BACT applies to GHG emissions from an "anyway source" after GHGs are subject to regulation under CAA section 111, the EPA has concluded that it continues to be appropriate to adopt the proposed language in 40 CFR 60.5515 (subpart TTTT).
>
> EPA acknowledges that the commenter's concern will not be fully addressed for an interim period of time, but (for the reasons discussed above) the part 60 provisions adopted in this rule are sufficient to make explicit that the 75,000 tpy CO2e BACT applicability level for GHGs will apply to GHGs that are subject to regulation under the CAA section 111 standards adopted in this rule.

This preamble language and the regulatory language indicates that EPA believes that only sources that are "regulated" under the new standard would trigger PSD requirements for GHGs and thus, EPA limits the fix to "affected facilities" under the new NSPS. However, by proposing new, comprehensive and untested methane standards without clarifying its intentions, EPA leaves room for interpretation of the rules. This room for interpretation could open up many sources to potential CAA citizen suits for failing to apply BACT for small increases in GHG emissions. Similar to the NSPS rule applicable to Electric Utility Generating Units, EPA must clarify that its intention for NSPS OOOOa is likewise that GHG emissions will be subject to PSD and Title V permitting requirements only if they are an "anyway source."

Alternatively, if EPA does intend for the proposed methane standards to trigger PSD and Title V permitting, sound policy and basic principles dictate that EPA must address the issue of a "significant" threshold for methane alone prior to finalizing this intent. Although EPA has issued a significant threshold level for the aggregate group of GHGs, this is not sufficient and EPA must issue a significant level for methane itself.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, the EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

Commenter Name: John Robitaille
Commenter Affiliation: Petroleum Association of Wyoming (PAW)
Document Control Number: EPA-HQ-OAR-2010-0505-6854
Comment Excerpt Number: 13

Comment: One of the primary concerns of PAW and its members is EPA's failure to make clear that the Proposed Rule will not trigger permitting under EPA's PSD and Title V permitting programs. The Proposed Rule is the first time EPA proposes to directly regulate methane under the CAA.

Under EPA's PSD and Title V programs, stationary sources that emit or have the potential to emit a pollutant at a level that is equal to or greater than specified thresholds are subject to major source requirements, including the application of best available control technology ("BACT"). Furthermore, any source that triggers PSD for any one pollutant must also apply BACT to any increase in any other regulated emissions, including GHG emissions. Unless clarified by EPA, once an NSPS regulates GHGs, GHGs (or individual components of GHGs) could be considered for purposes of triggering PSD and Title V. To do so would subject thousands of minor sources to unnecessary and unduly burdensome control and permitting requirements as well as trigger major permitting exercises for existing major sources.

This issue has been addressed in historic and recent rulemakings, although not fully resolved. EPA's 2010 Title II regulations addressing GHG emissions from auto and light duty trucks (and subsequently for other mobile sources) (the "Tailoring Rule") was challenged in court on the basis, inter alia, that EPA inappropriately regulated GHGs in the context of the PSD program under the CAA. In Utility Air Regulatory Group v. EPA (UARG), the U.S. Supreme Court struck down the EPA's interpretation of the PSD provisions of the CAA because the interpretation had the effect of applying the PSD requirements to a large numbers of small sources that previously had not been subject to PSD, and because, according to the Court, the EPA acknowledged that Congress did not intend that such sources be subject to the PSD requirements. See Util. Air Reg. Group v. EPA, 134 S. Ct. 2427, 2443 (2014).

In response to the Supreme Court's decision in UARG, EPA decided to implement only Step 1 of its Tailoring Rule, which includes the "anyway sources," such that the "anyway sources" would still be subject to PSD requirements for the pollutant GHGs (as EPA has defined the term) if a PSD permit were otherwise required for a non-GHG pollutant and there was a significant increase of GHG emissions. EPA has not to date, however, undertaken a rulemaking to determine nor has the agency otherwise announced the legal interpretation of the statute that would provide the basis for applying PSD to "anyway" sources.

EPA's recent final NSPS rule applicable to Electric Utility Generating Units also addressed, but did not resolve, this issue. 80 Fed. Reg. 64,662 (Oct. 23, 2015). Addressing the UARG decision, EPA states:

> While the PSD rulemaking described above is pending, the EPA and approved state, local, and tribal permitting authorities will still need to implement the BACT requirement for GHGs. In order to enable permitting authorities to continue applying the 75,000 tpy CO_2e threshold to determine whether BACT applies to GHG emissions from an "anyway source" after GHGs are subject to regulation under CAA section 111, the EPA has concluded that it continues to be appropriate to adopt the proposed language in 40 CFR 60.5515 (subpart TTTT).
>
> EPA acknowledges that the commenter's concern will not be fully addressed for an interim period of time, but (for the reasons discussed above) the part 60 provisions adopted in this rule are sufficient to make explicit that the 75,000 tpy CO2e BACT applicability level for GHGs will apply to GHGs that are subject to regulation under the CAA section 111 standards adopted in this rule.

Id.

In Wyoming, allowing methane to trigger PSD and Title V requirements would be particularly burdensome. If methane alone could trigger PSD permitting, many operators could exceed PSD and Title V thresholds, and would be subject to the unduly burdensome requirements of PSD and Title V permitting for typically small sources. This could result in significant obstacles to oil and gas production in the state, causing delays in development or rendering development prohibitively time consuming and expensive.

Regarding a resolution to this issue, PAW incorporates by reference API's detailed comments regarding the permitting implications associated with the regulation of methane. Specifically, and without conceding its position that EPA is required to make a separate endangerment finding for methane and for methane from this source category, PAW strongly encourages EPA to adopt an approach similar to that taken in the Clean Power Plan (NSPS Subpart TTTT), clarify the pollutant being regulated under the Proposed Rule is the group of GHG emissions (in the form of methane) , and include an explanation as well as a provision in the final rule that will address this issue in the context of the Tailoring Rule. Similar to the NSPS rule applicable to Electric Utility Generating Units, EPA must clarify that its intention for the Proposed Rule is likewise that GHG emissions will be subject to PSD and Title V permitting requirements only if they are an "anyway source."

In sum, EPA has an obligation to be clear regarding the implications of NSPS OOOO and OOOOa on PSD and Title V, and PAW respectfully submits that EPA clarify that it does not intend for methane to trigger PSD and Title V permitting under the CAA.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

Regarding the assertion that EPA must make an endangerment finding for methane as an individual gas, see the response to DCN EPA-HQ-OAR-2010-0505-6884, Excerpt 6.

Commenter Name: J. Roger Kelley
Commenter Affiliation: Domestic Energy Producer's Alliance (DEPA)
Document Control Number: EPA-HQ-OAR-2010-0505-6793
Comment Excerpt Number: 6

Comment: DEPA believes it would be an unduly burdensome and unlawful result for EPA to allow methane to trigger PSD and Title V requirements. As stated above, the Supreme Court rejected EPA's attempt to regulate GHGs under the PSD and Title V programs through the PSD Tailoring Rule:

> In sum, there is no insuperable textual barrier to EPA's interpreting 'any air pollutant' in the permitting triggers of PSD and Title V to encompass only pollutants emitted in quantities that enable them to be sensibly regulated at the statutory thresholds, and to exclude those atypical pollutants that, like greenhouse gases, are emitted in such vast quantities that their inclusion would radically transform those programs and render them unworkable as written.

This reasoning extends to the proposed regulation of methane under NSPS OOOOa. In addition, the UARG decision pointed out that specifically in the context of NSPS, EPA has historically limited the term "air pollutant." In light of the UARG decision, EPA would be unable to articulate a statutory interpretation that could reconcile why methane as a stand-alone pollutant triggers PSD and Title V under NSPS OOOOa, while aggregate GHG emissions do not under the Tailoring Rule.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, the EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

Commenter Name: John Robitaille
Commenter Affiliation: Petroleum Association of Wyoming (PAW)
Document Control Number: EPA-HQ-OAR-2010-0505-6854
Comment Excerpt Number: 4

Comment: Permitting Implications: EPA has failed to address the implications of the Proposed Rule on EPA's Prevention of Significant Deterioration ("PSD") and Title V permitting programs. EPA must ensure that methane emissions alone will not trigger PSD or Title V permitting by clarifying that EPA will not consider methane in determining whether a source is a major source for purposes of PSD and Title V. PAW incorporates by reference API's comments regarding this issue.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

Commenter Name: Rodney Sartor
Commenter Affiliation: Enterprise Products Partners L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6807
Comment Excerpt Number: 3

Comment: Direct regulation of methane emissions could have costly and unjustified impacts on other EPA permitting determinations.

This rulemaking would be the first time that EPA has directly regulated methane alone. As we have seen with EPA's 2009 endangerment finding for GHGs from mobile sources, once EPA directly regulates a pollutant under one part of the Clean Air Act, it is only a matter of time before EPA begins to regulate additional sources of the same pollutant under other parts of the Act. Direct regulation of methane (as opposed to regulations targeting VOCs) could drastically and unnecessarily increase the cost of the proposed NSPS because of the consequences it could have on other air programs. If EPA begins directly regulating methane, it could, for example, result in a significant increase in requirements for Prevention of Significant Deterioration ("PSD") permitting, or trigger minor New Source Review ("NSR") permitting. Such requirements could place increased burden on both the oil and gas industry, and the state and federal agencies tasked with handling the new permitting. New permit requirements would further harm the industry by leading to production delays, and even halting new development in some cases. We believe these additional permitting burdens would dramatically increase the cost of the proposed NSPS. EPA has not taken these additional costs into account in the regulatory impact analysis ("RIA") for the proposed NSPS, and should reevaluate these additional costs before issuing a final rule. Enterprise does not believe that these additional costs are warranted by the small percentage of methane emissions attributable to oil and gas operations, and therefore opposes this rulemaking.

Response: See section VII of the final rule preamble of the NSPS for the EPA's response to this comment. In section VII, the EPA clarified that the pollutant regulated by this final rule is the pollutant greenhouse gases (GHG) and explained the purpose of changes to the regulatory text is to ensure that a source is not required to obtain a PSD or Title V permit based solely on its GHG emissions and to maintain the current threshold for determining whether an "anyway" PSD source must satisfy the BACT requirement for GHGs.

2.3 Additional Comments

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider
Commenter Affiliation: Clean Air Task Force et al.
Document Control Number: EPA-HQ-OAR-2010-0505-7062
Comment Excerpt Number: 10

Comment: Global climate change is one of the largest challenges our civilization faces. The science of climate change, the risks it presents to human health and welfare, and the role of anthropogenic greenhouse gas ("GHG") emissions as the prime driver of this phenomenon are irrefutable. Immediate and deep cuts to global GHG emissions are necessary to mitigate the worst effects of climate change, and the United States must take a lead role in this process. For this reason, Joint Environmental Commenters strongly support EPA's decision to propose the first-ever nationwide methane emission standards for new and modified oil and gas infrastructure under section 111(b) of the Clean Air Act ("CAA" or the "Act"), 42 U.S.C. § 7411(b).

Methane Emissions from Oil and Gas Sources Are Significant.

Methane is a potent GHG that is a major contributor to climate change. According to EPA's own estimates, domestic man-made methane emissions reached nearly 640 million metric tons (MMT) in 2013 on a CO2-equivalent (CO2e) basis, accounting for approximately 9.5 percent of total domestic GHG emissions. Oil and gas sources accounted for approximately 151 MMT CO2e of methane in that year, about 29 percent of economy-wide methane emissions, and over three percent of all GHG emissions. As noted below, these figures most likely understate the actual impact of domestic methane emissions on our climate system, because they are based on 100-year global warming potentials that do not reflect the near-term potency of methane as a greenhouse gas. Nonetheless, based on Greenhouse Gas Inventory's ("GHGI") totals for 2013, the oil and gas sector is, and will continue to be, the single largest source of anthropogenic methane emissions in the United States. In light of these impacts, EPA's decision to propose new source performance standards ("NSPS") for methane emissions is urgently needed and entirely appropriate.

Response: The EPA has reviewed the comment, and agrees that global climate change is an important problem and that greenhouse gas and methane emissions are important contributors to climate change. The EPA recognizes the support for its regulatory actions.

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider
Commenter Affiliation: Clean Air Task Force et al.
Document Control Number: EPA-HQ-OAR-2010-0505-7062
Comment Excerpt Number: 20

Comment: EPA Has Authority To Create a New Subpart OOOOa for Its Proposed Methane Standards For Oil and Gas Sources

EPA is also correct to propose a new subpart to house its methane regulations for oil and gas sources. Because new source performance standards only apply prospectively, the agency's regular practice is to create a new subpart whenever it regulates a pollutant not previously covered under section 111 for a listed source category, or whenever it revises the applicable regulations for that category. For example, in 2008, EPA issued updated performance standards for petroleum refineries that tightened the allowable emission limitations for PM, CO, and SO2. These standards also limited refineries' NOx emissions for the first time. The new standards, which were issued under 40 C.F.R. § 60, subpart Ja, applied to units built or modified after March 14, 2007, whereas the earlier standards, listed under subpart J, continued to apply to units that came online prior to that date. Similarly, when EPA strengthened its NOx standards for nitric acid plants in 2012, it placed them in new subpart Ga, which applied to units built or modified after October 14, 2011. The earlier, less stringent standards remained in subpart G and remained applicable to units built before the October 2011 date. Other examples of this practice abound through EPA's regulatory history, and its creation of subpart OOOOa is entirely in line with that history.

Response: The EPA has reviewed the comment and recognizes the support for its regulatory actions.

Commenter Name: Darin Schroeder, David McCabe, Lesley Fleishman and Conrad Schneider
Commenter Affiliation: Clean Air Task Force et al.
Document Control Number: EPA-HQ-OAR-2010-0505-7062
Comment Excerpt Number: 19

Comment: EPA's approach will also help fulfill the agency's obligation to adopt an effective set of methane emission guidelines for existing oil and gas equipment in the future. In drafting section 111, Congress directed the Administrator to list categories of sources based on a category's impact on air quality, without distinguishing new versus existing sources. 42 U.S.C. § 7411(b)(1)(A). Congress then required EPA to address both new and existing sources of air pollution in each listed category. *Id.* and 7411(d). Because section 111 makes the extent of the agency's authority to regulate existing equipment contingent on the scope of the new source performance standards adopted under section 111(b), *see* 42 U.S.C. § 7411(d)(1)(A)(ii), establishing new source standards covering methane emissions from equipment already subject to VOC standards is essential to fulfilling the agency's statutory obligation to reduce dangerous methane emissions from the oil and gas industry, including the most significant existing sources of that pollutant. Moreover, as discussed above, the agency's failure to issue NSPS for methane emissions in 2012 was arbitrary and unlawful, and curtailing the coverage of existing sources by limiting the scope of the proposed standards to facilities not subject to the 2012 VOC rule would only compound that error. But even if EPA's failure to address methane in 2012 represented a valid exercise of the agency's discretion, there is no rational basis for declining to adopt methane standards solely on the basis that EPA chose to regulate VOC and methane from new sources in separate rulemakings.

Response: The EPA has reviewed the comment and recognizes the support for its regulatory actions.

Commenter Name: Howard J Feldman
Commenter Affiliation: American Petroleum Institute
Document Control Number: EPA-HQ-OAR-2010-0505-6884
Comment Excerpt Number: 31

Comment: THE PROPOSED RULE IS ARBITRARY AND CAPRICIOUS BECAUSE EPA FAILED TO CONSIDER THE IMPLICATIONS OF SECTION 111(D) OF THE CLEAN AIR ACT

EPA interprets section 111(d) of the Clean Air Act to apply to existing sources that would be regulated under a section 111(b) NSPS if the source were new, provided the source category and/or pollutant is not otherwise regulated under section 108 or 112 of the Act. *See* 80 Fed. Reg. 64662 (Oct. 23, 2015) (EPA's "Clean Power Plan" to regulate carbon dioxide emissions from existing electric generating units). Under EPA's interpretation, final promulgation of the proposed rule would trigger an obligation for the Agency to issue emissions guidelines for existing oil and natural gas sources under section 111(d). Assuming, for the sake of argument, that EPA's interpretation were permissible, the proposed rule should have to consider section 111(d) impacts. Yet, the proposed rule includes no reference at all to section 111(d) and no discussion of the potential regulatory implications to existing sources under section 111(d) by promulgating a NSPS for the oil and natural gas sector under section 111(b). As is plainly evident from the Clean Power Plan, regulation of existing sources under section 111(d) can and likely would have far greater potential impacts than the proposed standard for new sources. As a result, the Agency should have estimated the costs of regulating existing oil and natural gas sources in the proposed rule given its interpretation of the Act. EPA's utter failure to consider this important aspect of the decision to implement a NSPS renders the decision arbitrary and capricious. *See Motor Vehicle Mfrs. Ass'n v. State Farm Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("Normally, an agency rule would be arbitrary and capricious if the agency has … entirely failed to consider an important aspect of the problem….").

While EPA should have considered the impacts of the regulation of existing sources under section 111(d) as part of the proposed rule. The Clean Air Act does not impose a deadline on the Agency to propose emissions guidelines pursuant to section 111(d) once it has promulgated standards of performance for new sources under section 111(b). *See* CAA § 111(d). Moreover, because the proposed rule is legally flawed for the reasons described elsewhere in these comments, EPA would have no authority to adopt section 111(d) guidelines for oil and natural gas sources because the regulations under section 111(d) must apply only to "any existing source for any air pollutant . . . to which a standard of performance under this section would apply if such existing source were a new source." *Id.* § 111(d)(1)(A).

Response: EPA does not agree with commenter's assertion that the Agency should have estimated the costs of regulating existing oil and natural gas sources in the proposed rule. The

standards finalized in this rulemaking action do not apply to existing sources. As such, the cost of regulating existing sources is not relevant to this rulemaking process.

Commenter Name: Lee Fuller, Executive Vice President, and V. Bruce Thompson, President
Commenter Affiliation: Independent Petroleum Association of America (IPAA) and the American Exploration and Production Council (AXPC)
Document Control Number: EPA-HQ-OAR-2010-0505-6983
Comment Excerpt Number: 15

Comment: Overarching Comments Particular to the Proposed NSPS for Methane, Subpart OOOOa.

In Sections V and VI of the preamble to the proposed NSPS, EPA dedicates considerable verbiage attempting to justify the need and its legal authority to regulate methane from sources in the oil and natural gas sector. IPAA/AXPC disagrees with both the need and EPA's authority to regulate methane for the reasons set forth below.

EPA's interest in regulating methane is clearly a political decision rather than an environmentally driven decision. Its genesis can be easily seen in the strident demands from anti-fossil energy groups with agendas not to manage industrial emissions but to prevent the development of oil and natural gas. Groups like the Sierra Club have policies that are clear:

"There are no "clean" fossil fuels. The Sierra Club is committed to eliminating the use of fossil fuels, including coal, natural gas and oil, as soon as possible . . .Methane released via extraction and transport is 86 times more potent as a greenhouse gas than CO2 over a 20-year time frame. The climate-disruption impacts from methane and carbon dioxide emitted by extraction, transport and burning clearly point to the urgent need of keeping fossil fuels in the ground.

This group, along with others, made their demands known to the EPA in multiple meetings and letters, including a December 2013 letter stating the following:

"We commend EPA for updating its VOCs performance standards for this industry in 2012, but the job is far from finished. While some reductions in methane emissions will be achieved as a co-benefit of these 2012 rules, many emission sources are not adequately addressed, such as the vast network of equipment that was installed before those rules went into effect. EPA needs to take immediate steps to produce regulations to directly reduce methane pollution from new and existing equipment from this industry."

Once demanded, the issue of direct methane regulation became the pivot point for development of the current regulatory proposals. As discussed below, the drive for direct methane regulations for the oil and natural gas sector is driven by atmospherics and philosophy, not science or increased environmental benefit.

In reality, EPA was forced to propose regulations to satisfy a political agenda that is governed more by what "we [EPA] believe that the industry can bear . . . and survive." EPA's decision to promulgate methane standards from the exploration and production segment of the oil and natural gas sector is arbitrary and capricious. EPA states that it "believe[s] it is important to regulate methane from the oil and gas sources already regulated for VOC emissions to provide more consistency across the category . . . ." Yet in the very same sentence EPA admits "that the best system of emission reductions (BSER) for methane for all these sources is the same as the BSER for VOC." EPA continues that the BSER for the previously unregulated sources is the same for VOCs and methane. Simply put, the controls on the targeted emissions sources to reduce VOCs are the same as the controls to reduce methane – no more, no less. The "gain" – according to EPA – of adding yet another Subpart of regulations to the already extensive 40 C.F.R Part 60 is "consistency." What EPA chooses to ignore in its preamble discussion is the inevitable "loss" or cost to the industry associated with the regulation of existing sources under Section 111(d).

EPA is silent as to its "beliefs" on whether the industry can "survive" the cost and burden of regulation of existing sources under Section 111(d). This silence is notable and troubling. Clearly, since EPA demonstrates that the technologies used to regulate methane emissions are identical to those for VOC emissions, EPA's choice to expand its regulations to directly regulate methane can only be interpreted as opening a potential pathway to Section 111(d) regulations as the anti-fossil energy organizations demanded. And, while EPA fails to even mention Section 111(d), it must certainly know – based on the demand that existing methane sources must be regulated – that it will face efforts to force such regulation. EPA will surely respond that it will conduct the necessary cost-benefit analysis when it is "forced" to promulgate existing source standards under Section 111(d). Without debating the legalities as to EPA's duties under Section 111(d), this Administration has demonstrated time and time again its propensity to feign resistance to non-governmental organizations' (NGO) "demands" and enter into consent decrees with unreasonable short time periods to promulgate regulations. The irony is that EPA's rationale assumes that the underlying Section 111(b) regulations were necessary in the first place. What has the environment gained (above the benefits gained from VOCs) from regulating methane emissions from exploration and production directly? Nothing. EPA has admitted it. The controls are the same – equally efficient at controlling VOCs and methane. The cost? EPA relies heavily on its original cost-effectiveness analysis for the Subpart OOOO VOC regulations finalized in 2012 and engages in additional analysis discussed in Section VIII of the preamble, concluding that the proposed controls "for methane" are also cost-effective. But nowhere does EPA take into account the cost to the industry associated with the regulations that will likely be forced upon existing sources in this source category. Despite all of the complicated calculations and analyses, the simple fact remains that the controls for VOCs and methane from the targeted sources are the same. There is no demonstrated "need" or unique benefit associated with an additional set of standards specifically for methane. The true cost of the proposed methane regulations is incomplete and unknown without considering the cost associated with regulating existing sources under Section 111(d).

"Consistency across the category" is an insufficient justification. Historically, EPA has tailored new source performance standards to subcategories or segments within a larger, overarching category. One needs to look no farther than Subpart D and its progeny for Steam Generating

Units or Subpart E for Municipal Waste Combustors. EPA has shown it can be very creative in tailoring requirements to subcategories or segments within a listed category. Since the Administration first hinted at regulating methane directly from the exploration and production segment, IPAA/AXPC has advocated that such direct regulation was unnecessary, as the controls for VOCs were exactly the same as for methane. EPA acknowledged as much in Section VII in the preamble and stated "[w]e anticipate that these stakeholders will express their views during the comment period." IPAA/AXPC questions the appropriateness of EPA's decision to essentially ignore a central premise of two federal trade associations that represent approximately 54% of oil and 85% of natural gas exploration and production capacity of this country. Is it appropriate for IPAA/AXPC to guess as to EPA's reasoning and justification? Much of EPA's 67-page preamble is dedicated to justifying its legal basis for regulating methane directly and the cost-effectiveness of the proposed controls. It fails to address in any meaningful way why it is necessary or justified to promulgate methane standards from the exploration and production segment. EPA's justification boils down to: 1) EPA assumes it is has the legal authority to do so; 2) EPA has placed a high value on "consistency" within the source category; and 3) EPA "believes" the industry can "survive." EPA is on much stronger legal footing addressing segments or subcategories differently within the oil and natural gas sector than asserting it does not need a separate endangerment finding for methane. EPA's insistence, without explanation, on promulgating methane standards for exploration and production sources, when the controls are exactly the same, needlessly increases the regulatory burden on everyone –the regulated and the regulator. IPAA/AXPC should not have to guess until the rule is finalized and potentially litigate an issue that has been clearly articulated to EPA, the Small Business Administration, and the Office of Management and Budget long before the rule was even proposed.

Response: Regarding the assertion that VOC standards are sufficient to control methane, please see the EPA's response to DCN EPA-HQ-OAR-2010-0505-6927, Excerpt 6 which includes reference to the preamble section IV.D (Establishing GHG Standards in the Form of Limitations on Methane Emissions).

Commenter Name: Gretchen C. Kem, Sr. Policy Advisor, Environmental and Sustainable Development
Commenter Affiliation: Pioneer Natural Resources USA, Inc.
Document Control Number: EPA-HQ-OAR-2010-0505-6998
Comment Excerpt Number: 5

Comment: Potential to trigger regulation of existing sources under 111(d)

Because of the nature of oil and natural gas production, the application of controls on new sources will achieve the Administration's objectives without the need to create extensive existing source regulations. Oil and natural gas production operations are unique in that after the period of initial production, wells begin to decline; and as the production of the well declines, its ability to emit VOCs and methane into the atmosphere also declines. The declining nature of oil and gas wells also differentiates the exploration and production segment of the oil and natural gas sector from other segments further downstream where emissions remain fairly constant over time. This

is also in contrast to many other industries, such as manufacturing, where new sources tend to increase in emissions over time as a result of increasing production, or as a result of lack of efficiency due to aging equipment. As discussed further below under the Section II, comments specific to Methane NSPS OOOOa, ultimately the production from the "new" wells decline to the point where they become "marginal" wells. These are defined as any oil or natural gas well that produces 15 barrels/day of oil or less, or any natural gas well that produces 90 mscf/d or less of natural gas, during any consecutive 12-month period. Emissions from these older wells will be a smaller portion of the already very small percentage of upstream oil and natural gas GHG emissions, as discussed below, yet EPA's decision to regulate methane directly under Section 111(b) of the Clean Air Act (CAA) potentially subjects tens of thousands of existing wells to regulation.

Further, the regulatory burden on state and federal regulators of exposing thousands and thousands of existing sources to new regulation would be enormous. If EPA's regulation of methane was to pave the way for regulation of existing sources, this action is misguided and unwarranted; the time, manpower from both industry and regulators and economic burden will far outweigh any environmental benefit and will be a fruitless exercise.

EPA states that it "believe[s] it is important to regulate methane from the oil and gas sources already regulated for VOC emissions to provide more consistency across the category...." Yet in the very same sentence EPA admits "that the best system of emission reductions (BSER) for methane for all these sources is the same as the BSER for VOC." Simply put, the controls on the targeted emissions sources to reduce VOCs are the same as the controls to reduce methane - no more, no less. As IPAA/AXPC explains in their comments, the "gain" - according to EPA - of adding yet another Subpart of regulations to the already extensive 40 CFR Part 60 is "consistency." "Consistency across the category" is an insufficient justification. What EPA oddly chooses to ignore in its preamble discussion is the inevitable "loss" or cost to the industry associated with the regulation of existing sources under Section 111(d). As IPAA/AXPC argues, there is no demonstrated "need" or unique benefit associated with an additional set of standards specifically for methane. The true cost of the proposed methane regulations is incomplete and unknown without considering the cost associated with regulating existing sources under Section 111(d). Instead, EPA's new regulations should target the facilities with highest potential to emit (PTE) which are new sources, specifically facilities with higher throughputs, higher pressures, the most infrastructure, and therefore higher PTE as compared to the old stripper wells. No industry or state has unlimited resources to either implement or enforce a new regulation in thousands of facilities so the sensible and most efficient approach is to target largest facilities with greatest PTE.

Response: Regarding the assertion that VOC standards are sufficient to control methane, please see the EPA's response to DCN EPA-HQ-OAR-2010-0505-6927, Excerpt 6 which includes reference to the preamble section IV.D (Establishing GHG Standards in the Form of Limitations on Methane Emissions).

Commenter Name: Cory Pomeroy, General Counsel
Commenter Affiliation: Texas Oil & Gas Association
Document Control Number: EPA-HQ-OAR-2010-0505-7058
Comment Excerpt Number: 5

Comment: EPA Should Revise Its Approach to the Extent Necessary to Ensure that It Will Not Be Forced to Issue Existing Source Standards Under Section 111(d) of the Act.

EPA has indicated that even though it is proposing "new" source standards for methane under CAA Section 111(b), it does not intend to proceed with existing source standards under Section 111(d) at this time. Instead, EPA proposes to exercise its discretion to refrain from promulgating a rule under CAA Section 111(d) for the time being to allow operators to work through voluntary measures to reduce existing sources of methane emissions, which would potentially eliminate the need to regulate methane under CAA Section 111(d). TXOGA supports the concept of using voluntary measures to support a conclusion not only that there is no need for regulation of existing sources but also of new sources. We note that EPA could actually promote voluntary reductions by indicating its view in any final rule (or in advance of a final rule) that voluntary programs can be relied upon to avoid regulation under CAA Section 111(d).

Section 111 of the Act addresses pollutants on a source category-wide basis. Under CAA Section 111(b), EPA lists source categories which in the judgment of the Administrator "causes or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare," and then establishes "standards of performance" for the new sources in the listed category. For existing sources in a listed source category, CAA Section 111(d) sets out procedures for the establishment of federally enforceable 'emission standards' of any pollutant not otherwise controlled under the CAA's State Implementation Plan (SIP) provisions or CAA Section 112. CAA Section 111(d)(1) provides:

> The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by section 7410 of this title under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued or which is not included on a list published under section 7408(a) of this title or emitted from a source category which is regulated under section 7412 of this title but (ii) to which a standard of performance under this section would apply if such existing source were a new source, and (B) provides for the implementation and enforcement of such standards of performance. . . . ...

On July 23, 2015, EPA released a framework under which EPA can partner with oil and gas companies to undertake commitments to reduce methane emissions on a voluntary basis. EPA projects that this framework "has the capability to comprehensively and transparently reduce emissions and realize significant voluntary reductions in a quick, flexible, cost-effective way." On this basis, EPA officials propose to use voluntary measures and the guidelines under Section 182 to address emissions from existing sources in lieu of promulgating a rulemaking under CAA

Section 111(d). The *Methane Challenge* will be just one of the measures available to companies to address existing sources.

Thus, although EPA has declined to address it presently, future administrations may be tasked with issuing CAA Section 111(d) standards for existing oil and gas sources if the Section 111(b) standards are finalized.

To be sure, there is no deadline specified for promulgation of emission guidelines under Section 111(d) and EPA has explained the significant degree of discretion it has in establishing the guidelines when issued. Nonetheless, given the uncertainty in both the benefits and costs (discussed below), the lack of an endangerment and significant contribution finding as to methane emissions from the oil and gas sector (which we believe is required as a legal prerequisite to regulating methane emissions from this source category), and the profound implications for numerous small oil and gas source operators (many of whom are TXOGA members), we urge EPA to defer issuance of the Section 111(b) standards at this time.

Response: The EPA has considered the information provided by the commenter and finds that it does not provide credible evidence of flaws in the EPA's conclusions.

Commenter Name: Ed Ireland, Executive Director
Commenter Affiliation: Barnett Shale Energy Education
Document Control Number: EPA-HQ-OAR-2010-0505-5121
Comment Excerpt Number: 2

Comment: The American economic system has made the United States the world leader in abundant and low cost energy, thanks in no small part to contributions from Texas. But the proposed new EPA rules pose a direct threat to the shale energy revolution that is strengthening U.S energy security while reducing energy costs for all Americans.

Even worse, the rules the EPA are proposing are largely a Washington-designed solution that is searching for a problem. EPA's data show that methane emissions from oil and gas exploration and production are only 1.07 percent of total U.S. greenhouse gas emissions, meaning that methane regulations would impose new costs for minimal benefit.

Second, at least five recent peer-reviewed studies have found methane "leaks" from natural gas development are already well below the 3.2% leakage threshold, the rate at which scientists believe natural gas may lose its greenhouse gas advantage.

Third, according to EPA's own data, natural gas producers have reduced methane emissions by 35% since 2007, even as production increased by more than 20% over the same period. EPA data also show methane emissions from fracking have fallen 73% from 2011 to 2013, which is significant because over one-half of all natural gas produced in the U.S. is the result of hydraulic fracturing or fracking.

In fact, the enormous new supplies of clean-burning natural gas unlocked by fracking have helped the electricity-generating sector replace older coal-fired plants, reducing carbon dioxide emissions to their lowest level in 20 years, since natural gas emits about half the carbon as coal on average. The U.N. Intergovernmental Panel on Climate Change has also credited fracking with reducing emissions in the United States, which has led the world in reducing CO2 in recent years.

Simultaneously, technological innovations and enhanced regulations by the Texas Commission on Environmental Quality have allowed more produced gas to be captured, reducing emissions of methane. In one of the most heavily drilled parts of the Barnett Shale here in North Texas, oil and gas producers have reduced methane emissions by 37 percent since 2011.

Instead of allowing these accomplishments to continue, EPA has apparently decided to arbitrarily insert itself by unleashing a trifecta of unnecessary and costly regulations, driving up the cost of energy and slowing new job creation. These include not only the new mandates on methane emissions, but also for ozone and carbon dioxide.

The primary reason why methane emissions are falling is because it is in the economic interest of the oil and natural gas industry to capture as much methane, the primary component of natural gas, as possible. The EPA baselessly claims methane emissions will rise over the next decade, even though the current trajectory is downward.

More importantly, the EPA's proposed methane rules may actually stem the methane reductions by interfering with the industry's successes. Instead of investing in new technologies, companies will have to divert investments to compliance and reporting. In fact, financial analysts have already said that EPA's methane rule could wipe out smaller drillers, the same family-owned businesses that drill a significant number of wells here in Texas.

Response: The EPA recognizes the concern of the commenter that EPA rules work to enhance resource recovery and minimize the burden of compliance. The EPA consulted extensively with industry stakeholders through an open process to gather data and propose control measures and techniques that, by virtue of being the industry best practices in the field, could appropriately be considered the Best System of Emission Reduction (BSER), the criterion by which EPA adopts a standard under the NSPS. We used the comment and response process to further refine our proposal. The final requirements reflect additional input provided during the comment period from industry and the public and are efficient and effective safeguards for industry to follow.

Commenter Name: Don Anderson, Director of Environmental
Commenter Affiliation: MarkWest Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6957
Comment Excerpt Number: 54

Comment: By law, EPA is required to conduct a regulatory impact analysis ("RIA") for economically significant rules in order to provide to the public a careful and transparent analysis

of the anticipated consequences of economically significant regulatory actions. Key elements of an RIA should include the following three basic components: (1) a statement of need for the regulatory action; (2) a clear identification of a range of regulatory approaches, including a no action alternative; and (3) an estimate of the benefits and costs—both quantitative and qualitative—of the proposed regulatory action and its alternatives. With respect to this third element, EPA must base its analysis on the best available scientific, technical, and economic information; clearly document all assumptions and methods used in the analysis; discuss the uncertainties associated with estimates and assumptions; and publicly provide the supporting data and underlying analysis.

EPA erroneously assumes in support of its cost analyses for the various proposals that reducing one ton of methane is equivalent to reducing one ton of VOC. By law, methane is not considered a VOC. A VOC is any reactive hydrocarbon that participates in ozone atmospheric chemistry. Methane, on the other hand, is not an ozone precursor—and in fact, EPA's definition of VOCs expressly excludes methane. Because VOCs and methane are two very different compounds with different chemistry and atmospheric impacts, EPA cannot assume that if a requirement demonstrates either (1) that the methane reductions are justified by the costs, or (2) the VOC reductions are justified by the costs—that either the benefits necessarily justify the costs, or more importantly, that the benefits are interchangeable. To do so inappropriately conflates the potential environmental harm from two entirely different compounds—despite the fact that each behaves in the atmosphere differently and contributes to health and environmental concerns or conditions in vastly different ways. This assumption alone—arrived at without scientific or technical support—undermines EPA's entire RIA in support of this rulemaking.

Response: The EPA recognizes that the mechanism of harm from reactive VOCs and from methane are different. The benefits of methane emissions reductions considered in this rule stem mainly from methane's role as a GHG. While methane is in fact an ozone precursor (see response to DCN EPA-HQ-OAR-2010-0505-6872, Excerpt 34 (Chapter 12.4 Health Impacts of Ozone), the EPA's analysis focuses mainly on the climate benefits of methane emissions reductions. See also the response to DCN EPA-HQ-OAR-2010-0505-6957, Excerpt 56, on the appropriate consideration of cost per ton of methane and not cost per ton of VOC.

Commenter Name: Don Anderson, Director of Environmental
Commenter Affiliation: MarkWest Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2010-0505-6957
Comment Excerpt Number: 56

Comment: Furthermore, in certain cases and, again, with very different cost estimates between VOC cost per ton and methane cost per ton of emission reduction, EPA loosely justified adoption of a regulatory option based on the methane cost per ton alone. Without any support or rationale, EPA effectively equates the benefit of reducing one ton of methane with the benefit of reducing one ton of VOC, which is not accurate.

In short, EPA has failed to comply with its obligations "to propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs . . . ." Kinder Morgan refers EPA to API's discussion on cost analysis as it relates to the direct regulation of methane.

Response: The commenter argues that the EPA should consider the cost per ton of VOC reductions in addition to considering the cost per ton of methane reductions. However, given that EPA is considering the benefits per ton of methane emissions reduced, it is appropriate to also consider the costs in matching units (i.e., per ton of methane emissions reduced). Consideration of the costs per ton of VOC reduced is not germane here, any more than would consideration of the cost per ton of any other substance.

Commenter Name: Lee Fuller, Executive Vice President, and V. Bruce Thompson, President
Commenter Affiliation: Independent Petroleum Association of America (IPAA) and the American Exploration and Production Council (AXPC)
Document Control Number: EPA-HQ-OAR-2010-0505-6983
Comment Excerpt Number: 13

Comment: The Industry's Recent Past is Not Its Prologue – Therefore EPA's Proposed Regulations are Not Justified

EPA justifies its proposed regulations in large part on the last 10 years of growth in the American oil and natural gas industry – perhaps the most dynamic and rapid growth period in the history of the industry:

The EPA has projected affected facilities using a combination of historical data from the U.S. GHG Inventory, and projected activity levels, taken from the Energy Information Administration (EIA's) Annual Energy Outlook (AEO). The EPA derived typical counts for new compressors, pneumatic controllers, and pneumatic pumps by averaging the year-to-year increases over the past ten years in the Inventory. New and modified hydraulically fractured oil well completions and well sites are based on projections and growth rates consistent with the drilling activity in the 2014 Annual Energy Outlook."

As much as the oil and natural gas sector would like to see that growth rate continue to 2025, it simply will not happen, and the past few years illustrate the cyclical nature of the industry. The price of oil and natural gas has plummeted unlike EPA's hypothetical projections. Operators react quickly to market forces and in many shale plays very few wells are being drilled. For many small, independent operators in various plays, they have not drilled a well in 3 or more years – yet EPA is justifying the cost of the proposed regulations on the most rapid expansion in the history of the industry. The following charts from a recent article by Energy In Depth, based on EIA data, clearly illustrate the impact of market forces:

[The commenter included 2 charts on page 14 from the EIA showing the new-well oil production per rig for the Eagle Ford Region and Bakken Region for 2007 to 2015]

EPA's cost-effectiveness analysis of the proposed regulations "applies the monetary value of the saved natural gas as an offset to the" cost of the proposed controls. EPA then valued 1,000 standard cubic feet (Mcf) of natural gas at $4.00 for the RIA/cost-effectiveness analysis. The $4/Mcf assumption was based on EIA's 2014 Annual Energy Outlook forecasted wellhead prices for the lower 48 states in 2020 ($4.46) and in 2025 ($5.06). EPA considered the $4/Mcf to be "conservative" – presumably because of the predicted value of natural gas in 2020 and 2025. There are numerous problems with EPA assumptions. First, the New York Mercantile Exchange (NYMEX) settlement price for natural gas in October 2015 was $2.56 –36% lower than EPA's assumed value. EPA has repeatedly indicated that it will finalize the proposed methane NSPS by the summer of 2016, and no financial institution is predicting a dramatic increase in natural gas prices between now and then. For those subject to regulations that come into effect within the next year, EPA's "conservative" estimate of $4/Mcf based on government estimates of what natural gas will cost in 2020 and 2025 is meaningless. IPAA/AXPC appreciates that the "benefit" or value of the natural gas saved by the proposed regulations occurs over the life of the well; however, the emissions from any well are heavily "front-loaded" – with the greatest production, and thus potential emissions, occurring the first few years of the well's life – long before 2020 or 2025. Smaller independents, many conventional well operators, and operators of wells that are marginally economical will not be able to weather the storm until natural gas reaches EPA's conservative value of $4/Mcf. Wells will not be drilled or will be shut in prematurely, and other companies will simply go out of business because of EPA's erroneous assumption on the price of natural gas. EPA's cost-effectiveness analysis for all proposed controls should be based on a price of natural gas that: a) more accurately reflects the price of natural gas when controls will need to be implemented, and b) accounts for the "front loading" of emissions when the price of natural gas is much lower than the $4/Mcf assumed by EPA.

EPA's assumption of $4/Mcf natural gas also fails to acknowledge or account for significant regional differences in the price of natural gas. A review of the wellhead price of natural gas in Pennsylvania provides but one of the many dramatic price variations.

The chart above tracks the PA Price versus NYMEX average prices for the past 4 years and is current through October 2015. The "PA Price" is based on a weighted average of the Dominion South, Leidy, and Tennessee Zone 4 prices reported by Platt's *Inside FERC*. The separation of prices in Pennsylvania from the national index price is driven in large part by the lack of takeaway pipeline capacity and sheer volume of natural gas. The regional variation in price is not accounted for in EPA's cost-effectiveness analysis. Consequently EPA's inflated valuation of the price of natural gas will disproportionally impact certain regions of the country where local or regional factors result in prices that are significantly lower than the national average. EPA's cost-effectiveness analysis must take such significant regional price fluctuations into consideration when evaluating control options.

EPA is proposing regulations so fast that even it cannot keep up with the changing assumptions. Part of EPA's assumption of $4/Mcf natural gas was based on EPA's proposed Clean Power Plan. However, EPA's final Clean Power Plan changed its "assumptions," and EPA now "believes" renewables will play a greater role in the country's future energy mix and natural gas prices may not reach $4/Mcf until after 2030 – well beyond the EPA's analysis for the proposed

methane NSPS which ends in 2025. As Energy In Depth points out, the changing assumptions have a dramatic impact on the industry:

"According to EPA data compiled by the American Wind Energy Association (AWEA), a heavier reliance on renewables could result in natural gas prices that are at least 12 percent lower than what would be expected under EPA's base case projection [for the Clean Power Plan]. EPA also acknowledges in its RIA that a $1/Mcf change in price of natural gas translates to as much as a $19 million difference in its cost estimate. In other words, if natural gas prices averaged $3/Mcf instead of $4/Mcf, EPA could be overestimating revenue by roughly 24 percent. Based on the current 2012-2015 average natural gas spot price of $3.44/Mcf, EPA would be overestimating revenue by about $10.6 million. Under the "high renewables" scenario in the Clean Power Plan, which would depress natural gas prices even further, EPA's overestimate would be even higher."

"The additional costs could be devastating for an industry already suffering from a market downturn in commodity prices. An analysis by Oppenheimer & Co., for example, already found that EPA's methane rule could wipe out smaller drillers across the United States."

In addition to failing to account for the changed assumptions for the price of oil and natural gas as a result of the Clean Power Plan, EPA has made no effort to account for the impact associated with proposed Ozone NAAQS. For EPA to evaluate the proposed impact of the proposed methane NSPS in a vacuum, ignoring its own significant regulatory initiatives that will have serious impacts on the price of oil and natural gas, as well as the number of entities that will be subject to controls, is arbitrary and capricious. Every mutual fund and investment opportunity contains the standard disclaimer along the lines of – "past performance cannot guarantee future results." The oil and natural gas industry is no different – even without EPA impacting market forces with multiple regulatory disruptions.

Response: The EPA disagrees with the commenter that the natural gas price used in the final rule is inflated, for more information please see response to DCN EPA-HQ-OAR-2010-0505-6847, Excerpt 3 in Chapter 12 (General Cost Impacts) of this document.